

small air forces observer

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October 1989

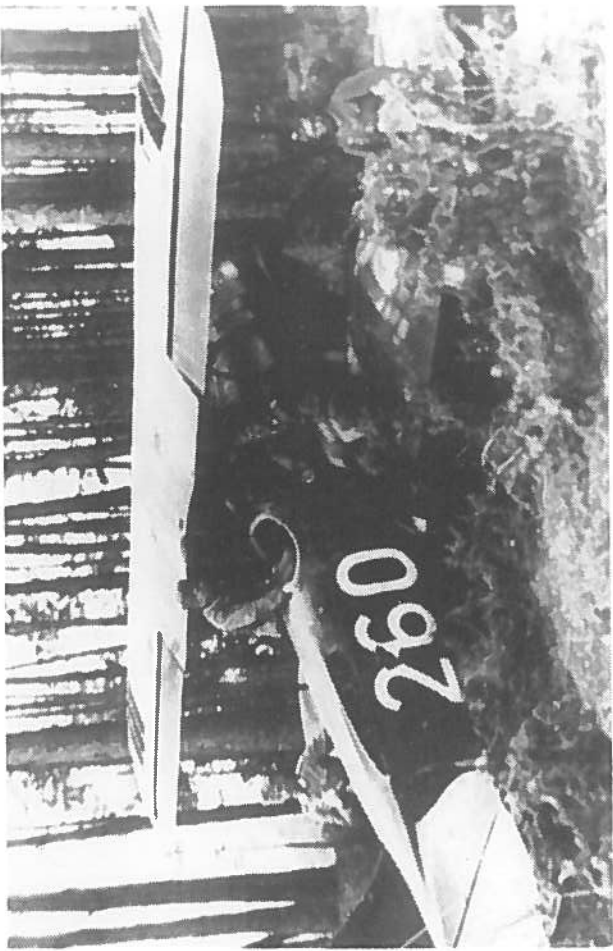
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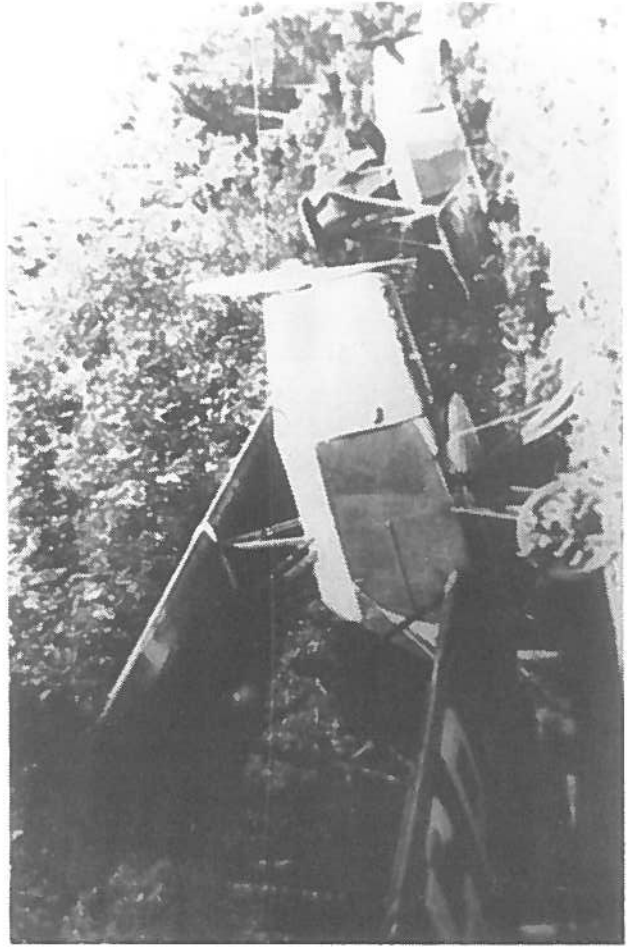
THE POLISH AIR FORCE IN SEPTEMBER 1939
THEY ALSO FOUGHT: THE SECOND-LINE UNITS
INVASION FROM THE EAST

vol 13 no 4 (52)

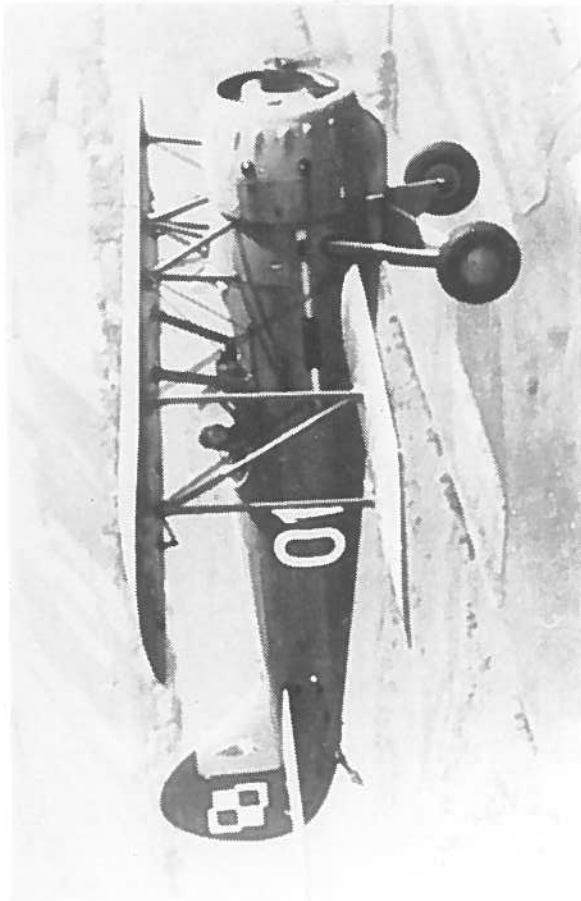
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small air forces observer

the newsletter of the Small Air Forces Clearing House

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EDITORIAL: Our series commemorating the 50th anniversary of WWII continues in this issue with coverage of the Polish Air Force in the September Campaign. A shortage of space requires that the articles on modeling PAF aircraft appear in the next issue along with the continuation of the Combat Report. Also scheduled for January 1990 is the story of the Finnish AF in the Winter War. Manuscripts on the air forces of Denmark, Norway, Holland, and Belgium are still welcome. Can SAFO members in these countries match the quality of the work by our Polish friends?

COVER PHOTO: A PWS-26, 81-20 '61' in silver finish overall with white center center section of upper wing. Note wide borders on wing insignia. (Chofoniewski)

PHOTO PAGE

- PWS-26 '01' from Deblin. Khaki overall with white fin. (Dabrowki)
- PWS-26 white "260" probably of the Szkola Podchorazych Lotnictwa (SPL). This machine was left behind by retreating Polish troops because it was unserviceable or because of lack of fuel. Note the national insignia have been removed by German souvenir collectors. (via Przymusiaka)
- Fokker F-VII/3m white "37", probably no underlying code, evidence number unknown. This machine (and another whose wing is partly visible in the photo) was damaged at Deblin-Irena airfield. The remains of an aircraft nearest the camera were probably an RWD-8. (via Przymusiaka)
- An extremely rare photo of Bartel BM-4h hidden among the trees. Note that the aircraft have civil registrations and crudely painted chessboards. (via Przymusiaka)

KEY TO THE PRONUNCIATION OF POLISH NAMES

[Editor's note: I owe the Polish authors of the articles in SAFO #51 a sincere apology for forgetting to insert the accents on the Polish names in their articles. I have not made the same mistake in this issue, and the pronunciation guide is repeated here.]

a	....	pronounce as	....	u	in	under
ą	....	"	....	ou	in	ought
c	....	"	....	ts	in	bits
ć, cz	....	"	....	ch	in	child
e	....	"	....	e	in	ever
ę	....	"	....	an	in	antidote
g	....	"	....	g	in	gift
h, ch	....	"	....	h	in	help
i	....	"	....	ee	in	feeling
j	....	"	....	y	in	york
ł	....	"	....	w	in	would
ń	....	"	....	n	in	ing
sz, ś	....	"	....	sh	in	should
u, ó	....	"	....	oo	in	loose
w	....	"	....	v	in	victory (in middle of a word)
w	....	"	....	f	in	leaf (at end of a word)
y	....	"	....	i	in	sit
rz, ż, ź, zi	....	"	....	zh	in	zhitomir

We have had a problem in finding proper equivalents for some of the Polish letters. For the letters a and e, exact equivalents do not exist in English, but there are perfect equivalents in French; ę as in bien or rien and ą as in bon ton, bonjour, garçon. Also, ź and ż should be said softly, and ż and rz hard.

SAFO EDITORIAL POLICY: The purpose of the SAFO is to "promote interest in the history and modeling of the aircraft of the smaller countries". In support of this goal, the SAFO encourages international cooperation in researching the history of aviation on all aspects of aviation, both military and civil, from all periods of time, and for all the smaller countries. In return for this support, members are asked to submit occasional progress reports for publication in the SAFO. While the final results should appear in the most prestigious publication possible, it is requested that the SAFO be mentioned (with address) in the article and that SAFO be afforded the opportunity of reprinting the material.

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AUSTRALIA

AUSTRALIAN PLASTIC MODELLER'S ASSOCIATION (APMA, PO Box 51, Strathfield, NSW 2135; 4 issues airmail A\$ 18.00).

2/89 (36 pages) "International Control Commission Porter" 1/2 page including side-view drawing. "Miracles in Grey: Pt. 6" 3 pages including two 3-view drawings. "PR Hurricane Variants" one page including 2 side-view drawings. "Midway's SH-3H's" 4 pages including two 3-view drawings. "Flight of (FAA) Fancy" 1/2 page with side-view drawing of Harrier in imaginary RAN markings. "First the Jeep, Now the Fleep" 4 pages on the Australian version of the flying jeep including 1/35- and 1/72-scale drawings. "The Pearly Gates": RAF Learjets" six pages including one photo, sketch-page, and 5 side-view drawings. "National Safety Council Beechcraft 200C's" 6 pages including photo and 10 side-view drawings.

NEWS AND VIEWS (IPMS NEW SOUTH WALES, PO Box 637, Broadway, NSW 2007; 4 issues A\$ 20.00 surface or A25.00 air mail).

2/89 (28 pages) "The Seagoing Emil" 4 pages including 1/36-scale drawings and 5 side-view drawings. "Supermarine Seafire FR47" 1/2 page including side-view drawing. "Resin Moulding Techniques" 2-page how-to article. "The Hawker Sea Fury" 9 pages including history of RAN aircraft, drawing of cockpit interior, and 9 side-view drawings of RAN aircraft. "Naval Biplanes" one page with side-view drawings of RAN Seagull V and Southampton. "Flying Nightmares: USMC PBJ-1" 4 pages including 4 side-view drawings. "Goodyear F2G" 2 pages including conversion drawings and 2 side-view drawings. "Argentine Naval Harvards" 2 pages including 4 side-view drawings.

AUSTRIA

OFH NACHRICHTEN (Oesterrichische Flugzug Historiker, Kannwegasse 1/15, A-1150, Wien).

2/89 (28 pages) "Phonix D.III Jagdeinsitzer" 5 pages including one photo and 2 side-view drawings of Swedish aircraft and 1/72-scale drawing of aircraft 'J.41'. "Im Anflug auf Wien 1918/1988" 6 pages including 2 side-view drawings of Italian SVA. "Austrian Air-lines Airbus A-310-324" 5 pages including 2 side-view drawings and 5 photos (one in color).

CANADA

RANDOM THOUGHTS (IPMS Canada, Box 626, Stn. B, Ottawa, Ontario K1P 5R7; 6 issues for US \$16.00 in US \$18.00 elsewhere).

20/1 (24 pages) "The Canadian DC-6" 10 pages including 18 photos and 4 side-view drawings. "DHC-3 Otter Details" 3 pages of sketches.

DENMARK

NYT (IPMS Denmark, c/o Bjorn Jensen, Rosenvaegets Alle 6, 2100 Kobenhavn O; 4 issues for 90 Dkr surface, 100 Dkr airmail).

#43 (30 pages) "PZL-37 Los" 5 pages including 1/72-scale drawings. "An-2" 3 pages including 4 photos and a page of sketches.

#44 (30 pages) "Tu-154" 2 pages including one photo and 2 side-view drawings. "Danish Meteor NF11" 5 pages including 4 photos and a 2-page scale drawing.

ENGLAND

MAGAZINE (Neil Robertson, 16 Green St., Greasbrough, Rotherham, South Yorkshire, S61 4EF, 6 issues for £12.00. US subscription agent: Wise Owl Publications, 4314 West 238th

St., Torrance, CA 90505; \$22.00)

3/89 28 pages) "Airwar over the Balkans 1940-41" 8 pages including side-view drawings of 12 Yugoslav and 5 RAF aircraft. "Lavochkin La-5" 2 pages including 4 side-view drawings. "Singapore Hunters" 2 pages including 4 side-view drawings. Plus 4-page "Product Review Supplement".

4/89 (24 pages) "F-104S Starfighter Intercettori Classico" 4 pages including 8 photos and one side-view drawing. "Operation Jubilee: Dieppe, 19th August 1942" 8 pages including 11 photos of models and 10 side-view drawings (Spitfires, Hurricanes, Typhoon, Mustang I, & Boston III). "Photo-Reconnaissance Hurricanes" one page including 2 side-view drawings. (Plus 8-page Product Review.)

PLASTIC KIT CONSTRUCTOR (Pamag, Freepost, 22 Slayleigh Ave., Sheffield S10 1BQ; 4 issues £ 15. In USA: J.J. Daileida, 4314 West 238th St., Torrance, CA 90505; 4 issues \$18.00).

#20 8/89 (32 pages) "The Harrier Story: Part 1" 5 pages including 8 photos and 4 side-view drawings. "Matchbox Wessex" 2 pages. "Rumanian AF Mel09G" 1/2-page drawing of a/c with USAAF insignia. "Italian Reconnaissance Starfighters" 2 pages including 9 photos.

THE PUTNAM AERONAUTICAL REVIEW, Conway Maritime Press Ltd., PO Box 10, Teignmouth, Devon, TQ14 9HH; 4 issues for \$33.00.

1/2 July 89 (64 pages) "Curtiss NC-4: First Aircraft to Cross the Atlantic" 7 pages including 9 photos, one map, and one 3-view drawing. "Voyage of His Majesty's Airship R34" 8 pages including 15 photos and one map. "Alcock and Brown: First Across the Atlantic Direct" 9 pages including 10 photos and one map. "Another Vimy, Another Time" 4 pages including 7 photos. "Grumman Aircraft in War-time Service with the Fleet Air Arm" 7 pages including 15 photos. "No. 25 Squadron Royal Air Force" 8 pages including 12 photos and one side-view drawing. "Building Britain's Best Heavy Bomber" 8 pages including 30 photos. "VC10/Super VC10: Small Fleet Operators" 3 pages including 5 photos. "Regional Airport: Hamburg" 6 pages including 12 photos.

GERMANY

MITTEILUNGEN (IPMS Germany, Bergengruenstrass 5-7, D-1000 Berlin 38; 12 issues DM 60.00 Europe, DM 65.00 USA, DM 70.00 Japan, DM 75.00 Australia).

3/89 (30 pages) Nothing of small-air-force interest.

HUNGARY

AERO HISTORIA (Kozlekedesi Muzeum, Budapest, Varosligeti krt. 11 Levelcim).

December 1988 (48 pages) "Caproni Ca-135 in the Hungarian Air Force: Part 1" 7 pages including 4 photos. "Hungarian Air Force Ju-88: Part 3" 10 pages including 9 photos and 4 pages of 1/72-scale drawings. "The Budapest Airlift (Dec. 44 - Feb. 45): Part 1" 5 pages including 2 photos.

ITALY

AEROFAN (Gioglio Apostolo, via Ampere 49, 20131 Milano; 4 issues L 40.000).

3/89 "Italian Fighters after WWI: Part I" 4 pages including 6 photos and small scale-drawings of Pegna Progetto G, Piaggio P2 (2 versions), & Tebaldi-Zari (3 versions). "Monographie: Fiat G 46" 2 pages with 5 photos of interior details and a page of drawings of

instrument panels. "A Mission of the 253rd Squadriglia" 3 pages including 4 color photos of SM S.79. "First Canard of Stefanutti" 5 pages including 6 photos, plan-view drawing, and color side-view drawing of SS-2. "An Autogyro for the Regia Aeronautica" 4 pages including 2 photos and 3-view scale drawing of Cierva C8L-III in Italian markings. [Editor's note: Anyone interested in helping with a special SAFO on small-air-force autogyros?] "Technical Description of CA.309 Ghibli" 4 pages including 2 photos and detailed drawings.

IL NOTIZIARIO (IPMS Italy, CP 182, 41100 Modena Ferrovia; 4 issues 24,000 Italian Lira in Europe or \$18.00 overseas).

1/89 (32 pages) "Fiat G-55 Prototype" 4 pages including 4 photos and 1/72-scale drawings. Bucker Bu.131 Jungmann & Bu.181 Bestmann" 3 pages including 6 pages and one side-view drawings (Soviet Bu.181).

JP-4 (JP-4, CP 1550, 50100 Firenze; L 27.000 Europe, L 30.000 elsewhere).

5/89 (98 pages) "The Nest of Helicopters Pilots" 5 pages including 6 color photos of Italian OH-13H. "Trimotors over Sirte" 5 pages including 12 photos of Ca.101.

6/89 (98 pages) Color photos: Omani AS.202 Bravo 'A40-AZ'; Chinese Il-14, An-2, C-47, Il-18, & An-26. "The Canadians in Europe" 11 pages including 14 color photos. "AMX" 9 pages including 10 color photos and cutaway drawing. "The End of an Age" 4 pages including 5 photos of Latecoere 631.

7-8/89 (98 pages) "Nei Cieli della Fortezza Svizzera" 12 pages including 18 color photos of Swiss AF aircraft. "Quelli del Pegaso" 4 pages including 7 color photos of SM.1019A, AB.206C, & AB.212 of 30 Gruppo. "Tre Aerei in Fuga" 6 pages including 7 photos of Macchi C.205 in markings of Aviazione Nazionale Repubblicana.

USA

WWI AERO (Leonard Opdycke, 15 Crescent Rd., Poughkeepsie, NY 12601; 5 issues \$ 20.00).

#125 (122 pages) "The Halberstadt Saga" 9 pages including 10 photos. "Curtiss Model D Type IV SC No.2" 11 pages including 19 photos. "Moon Moonbeam" 5 pages including 4 photos and scale drawings. "Some Questions about German Printed Lozenge Camouflage" 9 pages including 32 photos. "Berkmans Speed Scout" a 2-page scale drawing. "Fokker Spin" one photos and a 1-page scale drawing.

PRI-FLY (IPMS Washington DC, c/o Carol Fleckenstein, 13816 Choptank Ct., Centreville, VA 22020; 4 issues \$7.00 for US, \$8.00 all others).

#72 (16 pages) "Getting Out in a Hurry: Buccaneer" 2 pages with a pages of drawings of ejection seats. "Cramped, Cold, & Comfortless" one page of drawings of F4B-4 and Mureaux 117 cockpits.

PACIFIC MODELEER (USA \$7.00, others \$8.00 from IPMS-Hawaii, PO Box 1941, Pearl City, HI

#27 (12 Pages) "Last Flight of Coast Guard #1355" 4 pages including 5 photos of HH-52A.

WW2 JOURNAL (Merriam Press, 218 Beech St., Bennington, VT 05201; published irregularly; \$10.00 each; \$12.50 non-USA). Catalog \$2.00.

#1 (102 pages) "VFP-1: The US Navy's French Patrol Squadron" 3 pages including side-view drawing of Ventura. "Critical Battles and

Turning Points in the Luftwaffe's War Effort: Part 1" 15 pages. "Boeing XF8B-1" 2 pages including scale drawings. "Waker 'Bud' Mahurin" 3 pages including 4-view drawing of his P-47 'UN-M'. "Hermann Graf: 9th-Ranking Experten" 9 pages including 5 side-view drawings of his aircraft. "RAF P-51D Camouflage & Marking Scheme" one page of specification drawings.

#2 (102 pages) "No. 6 (RCAF) Bomber Group" 4 pages. "Critical Battles and Turning Points in the Luftwaffe's War Effort: Part 2" 19 pages. "An Ace Called Gentile" 6 pages. "Blohm & Voss P.192.01" 2 pages including scale drawings. "VPB-106: The Wolverators" 5 pages. "Blackburn B-44" 2 pages including scale drawings.

YUGOSLAVIA

AEROSVET INTERNATIONAL, 21000 Novi Sad, Vojvodanskih Brigada 7. In English; 4 issues \$20.00.

1/1 June 89 (40 pages) "New Super Galeb G-4M" 2 pages including 2 photos. "What's so Interesting about Su-27?" 1/2 page. "At the MiG-29 Assembly Line" 2 pages including 8 color photos. "Two Designs of a New Concept" 3 pages 3 pages including 3-view drawings and 2 photos of YU-AGS and YU-AGD agricultural aircraft. "Stealth Powered Hang-Glider: Is it Feasible?" 3 pages.

AIR INTERNATIONAL

BANGLADESH: "South-East Asian Air Arm", Vol. 36, No. 1, page 7.

CANADA: "Canada's Husky Boeings" (CC-137s), Vol. 36, No. 1, page 18. "A: Able Airbourne Again" (Canadian Warplane Heritage's Lancaster MkX), Vol. 36, No. 1, page 39. "Hunting Sea Dragons" (Canada's Sea Kings), Vol. 36, No. 9, page 177.

CHILE: "Inside ENAER", Vol. 36, No. 1, page 7.

GIBRALTER: "GB Airways", Vol. 36, No. 4, page 174.

GREECE: "The Last Thunderflash Again!" Vol. 36, No. 4, page 186.

PHILIPPINES: "Cobras, Bulldogs, and Black-jacks", Vol. 36, No. 4, page 243.

SOUTH AFRICA: "Mirage into Cheetah", Vol. 36, No. 4, page 182.

SRI LANKA: "The Sri Lanka Air Force Today", Vol. 36, No. 3, Page 136.

SWITZERLAND: "Alpine Air Power", Vol. 36, No. 6, page 284.

Compiled by Tot Scott (SAFCH #403), 168 59th Ave., Chomedey, Laval, P.Q., CANADA H7V 2B8.

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THE POLISH AIR FORCE IN GREAT BRITAIN

DESTINY CAN WAIT, THE POLISH AIR FORCE IN WORLD WAR II, 401 pages, 128 photos, maps, 6" by 9". An official history of ex Polish Air Force personnel \$29.95 plus \$2.00 postage.

This story of young (and not-so-young) men (and women) fighting far from their homeland was written immediately after the war. Although written by a committee, it has an immediacy and lyricism that has seldom been equalled in aviation literature. It is also a source of amazing detail on aerial actions. It is a requirement for even the most rudimentary small-air-force library. Available from: Battery Press, PO Box 3107, Uptown Station, Nashville, TN 37219.

-information wanted-information wanted-information wanted-information wanted-information wanted-

IPMS-INDIA NEEDS HELP

"IPMS-India was recently formed as a division of the Indian Academy of Model Aeronautics. Unfortunately, modelers in India are so starved of modeling resources that, at the moment, the hobby cannot grow. Last year they received, from IPMS-UK and IPMS-Switzerland, a gift of 50 plastic model kits. It was, however, decided to promote static modeling in wood and acrylic. The major handicap is the non-availability of literature, especially accurate scale plans.

"On behalf of the members of IPMS-India, I would like to ask SAFCH members to help by sending scale plans of aircraft, ships, vehicles, etc. to: IPMS-India, D.J. Engineer, Bhiwandivala Terrace, Block B/4, J.S. Road, Dhobi Talao, Bombay-400 002, INDIA. European readers may want to send them to me and I will take care of the forwarding postage.

"IPMS-India are planning a newsletter for the near future. If they succeed, I think this will be of benefit to all Small-Air-Force buffs!"

Rajesh Ganesh (SAFCH #918), van Ostadelaan 88, 2282 VK Rijswijk (ZH), The NETHERLANDS.

BOOKS WANTED

"Wanted to purchase the following publications: (1) "Operation Puma: The Air Battle of the Bay of Pigs" by Edward B. Ferrer, (2) "Gran Chaco Adventure" by Thomas Wewege-Smith, or (3)

"Mr. Brown, Aventurero del Cielo" by Jean Zumbach. Reasonable price will be paid."

Ron Fontana (SAFCH #688), 1518 Lakeshore Dr., Metairie, LA 70005.

DATA WANTED ON WWII AIR FORCES

"I want to correct some small errors in Douglas Dildy's otherwise excellent article on the war plans of the Poles and Nazis (SAFO #51). The 3 Gruppen of KG 77 flew the Do 17E during the Polish Campaign and KG 1 flew He 111H's; no He 11E's participated in the invasion of Poland. I/ZG 76 was assigned to Fliegerdivision 2 according to Greens's 'Warplanes of the Third Reich'. III/StG 51 was transferred from Luftflotte 3 to Luftflotte 4 at the beginning of the campaign, probably, but not definitely, to the Fliegerfuhrer zbV.

"I'm researching the histories of the air forces of Bulgaria, Switzerland, Rumania, Greece, Turkey, Yugoslavia, Hungary, Czechoslovakia, Belgium and Sweden from '38 to '46 for the 'Europa' series of wargames. I need information on the number and types of the combat aircraft and their organization for the above countries. Particular points of difficulty include delivery dates and units of the wartime Swedish and Turkish AFs and the 38-39 structure of the Greek, Turkish, Yugoslav and Czech Air Forces."

Jason Long (SAFCH #888), 5487 S. Hyde Park Blvd., Apt. 1N, Chicago, IL 60615.

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NEWS FROM NEW ZEALAND

"Regarding the RAAF Otter in SAFO #49. The early scheme is stated to have had plain RAF Type D (red center) roundels, but two photos of A100-392 in "Australia's Military Aircraft" show these confined to the wings, with kangaroo roundels on the fuselage sides. This being the standard style for the time kangaroo roundels were introduced in 1956 until some time in the mid-1960s when the use of kangaroos was extended to the wings (facing forward, feet in toward the fuselage). The fin flash on these aircraft was not outlined so the central white stripe tended to get 'lost' against the white background, leaving just the red and blue stripes. The propeller hub also looks as though it may be black.

"According to AMA, two Otters were purchased in August 1960 for use at Woomera. A100-390 was received on 24 February 1961 and A100-392 on 17 February 1961, and served until 1967. The odd serial numbers are due to most Australian aircraft using the 'last three' of their construction number as a serial.

"On Sunday, 18 June 1989, an Iroquois of 141 Flight hit power cables on an exercise in the Malayan state of Melaka. The aircraft made an emergency landing and none of the five crew and passengers were hurt.

"On 28 June 1989, two Iroquois from the same Flight made their last flight over Singapore to say good-bye to the island. The Flight, 3 helicopters and 43 personnel, is to disband in July and return home, two helicopters going to Wigram and one to Hobsonville. Along with the 1st Battalion, Royal New Zealand Infantry Regiment and various small units, all NZ forces are being withdrawn from South East Asia after more than 30 years, leaving only a small liaison unit of less than 20 personnel.

NZ forces will continue to exercise in the area, but will no longer be stationed there. According to the Defence PR Officer there will be no actual disbandment ceremony for the Flight, but there will be several ceremonies for the force as a whole between 17 and 21 July. Two of the Iroquois will be flown home by Hercules in late July and the last in September (the one that was damaged in Malaysia?). 1412 Flight preserved the number and traditions of 41 Squadron which was stationed in Singapore for many years, by adding 100 to the squadron number to give the Flight number."

Paul Adams (SAFCH #773), 81 Ponsonby Rd., Ponsonby, Auckland 1, NEW ZEALAND.

MIG MANIA UPDATE

"A quick update on MiG MANIA. I have been getting some unusual MiG shots; some for actual use in the books and other for use as color references. Cleared photos include MiG-15 in South Korean markings, several Cuban MiG-21MF and MiG-21US, Angolan MiG-21bis, Afghan MiG-21MF and MiG-21US, Algerian MiG-15, PDY MiG-21, and some very good material on Cambodian MiG-17 and MiG-15UTI. Color reference photos include South Korean marked F-6 & F-7, Madagascar MiG-17F & MiG-21MF, and Iraqi MiG-21, MiG-23, & MiG-29. Africa is still a bit thin, but I hope to get more material from a newly-developed French source.

"I've started the color art work for the first volume, and if all goes well, I hope to have it in Squadron's schedule for next year. With the first kit of Fujimi's 1/72-scale MiG-21 series due out in October, I'd like to have the first book out sometime during the middle of their five-kit release schedule."

Nick Waters (SAFCH #2), 5509 Darby Lane, The Colony, TX 75056.

SEPTEMBER CAMPAIGN

THEIR EAGLES WERE THERE

PART 1: 1 SEPTEMBER TO 3 SEPTEMBER

It is indicative of the immense impact and importance of tactical aviation upon military thought of the mid-20th century that the first shot fired in the Second World War was not a shot at all, but a 250-kg bomb dropped by Oberleutnant Bruno Dilley, squadron commander of the 3rd Staffel/I Gruppe/1st Stuka Geschwader (abbreviated 3./StG 1 or I/StG 1). Although Tony Wood and Bill Gunston's account of this ignoble act is dramatic, it comes more from the Ju.87B Technical Order (pilot's manual) than from fact (1). In reality, Olt Dilley led a flight of three Stukas on a low-altitude flight up the Vistula River in the early-morning half-light, weaving between patches of dense fog. At 0434 hours, they made a 300-foot, level delivery on the demolition points of the two bridges across this wide river at Dirschau. Although they scored direct hits, and even though the Panzers in the south rolled across the Polish frontier at 0445, the armored train that was supposed to trundle across the now-safed Dirschau bridges was somehow delayed. Despite a follow-up attack by III/KG 3's Do.17, the Polish defenders were able to repair the damaged demolition points and "blow" the bridge before the "Panzerzuege" arrived (2). However, neither Dilley's attack or the Poles blowing the bridge would have any marked affect on the trauma that was about to grip Poland. In the south, the Panzers were rolling and the Stukas were screeching earthwards; the fortnight of Poland's bitter glory was about to begin.

CHAPTER I

KRAKOW OVERTURE

1 September 1939

Armies Air Forces: Armies Krakow, Lodz, and Poznan

As General von Rundstedt's Army Group South (AGS) unleashed its forces (four Panzer, two motorized, and 16 infantry divisions) upon the hastily prepared Polish Army Krakow and Army Lodz (10 infantry divisions and 3 cavalry brigades), General Loehr's Luftflotte IV droned eastward hampered by fog and low clouds. Over the front, screaming Stukas assaulted the Polish field fortifications at Wielun and roaring Hs.123 hit Panki. During the day, one of the Army Lodz's two cavalry brigades was located forming up behind Wielun and was hit repeatedly by successive waves of Stukas (from I/StG 2 and I/StG 77) and Do.17 (I/KG 77). By 1800 hours it ceased to exist as a fighting unit (3).

Ninety He.111 of all three gruppen of KG 4 ranged deeper into southern Poland; their targets were Lotnictwo Wojskowe airfields. Gruppe II/KG 4 hit Lvov (4) and Lemburg airfields, destroying six Polish aircraft at the latter (5). Gruppen I and III/KG 4 hit the large Krakow airfield, dumping 48 tons of bombs upon it.

A follow-up raid by Ju.87B of I/StG 2, however, went awry because of the marginal weather. Finding themselves above the clouds, they dived down through the undercast to locate their target. This maneuver resulted in the formation becoming disorganized and several individual pilots becoming separated and disoriented. The target was nowhere to be seen.

One squadron commander wisely decided to abort the attack and take his remaining Stukas back to base.

Poland experienced a full measure of bad luck that fateful September, and it began when 1./StG 2, in disarray and feeling their way homeward, stumbled across the "campaign landing field" of Army Krakow's fighter dyon (III/2). Upon hearing that their home field was under attack, PZL P-11 of the 121st Esk were just scrambling to get airborne when the Stukas wandered across the field, hurriedly dumping their unused bombs. The startled pilots of both sides began firing at anything that passed in front of them and at 0520, the first air-to-air kills of World War II were recorded: Captain Mieczyslaw Medwecki, CO of III/2 Dyon (6); and a Stuka of 1.StG 2 shot down by Lt Wladyslaw Gyns (7).

[Editor's note: Recent analysis by Jerzy Cynk indicates that the first Luftwaffe aircraft to fall to a Polish fighter was not a Stuka but one of two Do.17E of KG 77 shot down by Gyns. See the authoritative notes by Cynk in FIRST KILL, Gnys, William Kimber, London, 1981.]

The Krakow airfield was a high priority target for the Luftwaffe. A third raid was mounted: 30 Do.17Z of III/KG 77 found the target so obscured by smoke and dust that they came in level at 150 feet. So many bombers were damaged by splinters, fragments, and flying debris from their own bombs that this unit was out of action for several days (8).

There were attacks by Stukas and Heinkels on several other Polish airfields. Stukas from StG 76 and StG 77 hit Katowice, Wadowice, and Lublinitz airfields (9). Heinkels and Dorniers attacked airfields at Radom, Lublin, and Lodz (10). The raid on Rakowice, found aircraft sitting all over the airfield and later Do.17P reconnaissance photos showed 28 airplanes destroyed in the attack (11). With these photos and others feeding Herr Goebbels's propaganda organ, the myth of the first-day destruction of the Lotnictwo Wojskowe on the ground began (12); an untruth which, even at this late date, has proven difficult to dispel.

On the contrary, fighter dyons all along the frontier were responding to the invader's raids. Army Krakow and Poznan PZLs shot down five more Nazi raiders. Army Poznan's Dyon III/3, lacking information on enemy activities, largely spent the day on the ground at their campaign landing field at Dzieznica. As Major Mieczyslaw Mumler, the dyon commander said: "Without advance warning, without knowing what was coming, it is not so easy to intercept; and with so many messages coming in from headquarters in Warsaw, communications broke down." (13) This lack of early-warning information resulted in sporadic engagements and isolated successes insufficient to favorably influence the battle.

Armies Air Forces: Army Pomorze

Beset upon from both east and west by the German 3rd and 4th Armies, Army Pomorze was caught in a vise. Its Air Regiment fought in all directions simultaneously. Lt Stanislaw Skalski of 142nd Esk (soon to be the top scoring Polish fighter pilot) shot down an Hs.126 Army Co-op aircraft for the III/4 Dyon's only "kill" of the day. The Regiment's 42nd

Assault Esk, flying P-23 Karas, as well as its 43rd and 46th Army Co-op Eskadry, flew numerous observation missions. Unequipped with modern radios, these aircraft had to fly over enemy lines, sketch rough maps or write down their observations on paper and then recross Polish lines to drop the note at a field headquarters. This constant crossing and re-crossing of the battle lines cost the Lotnictwo Wojskowe dearly, Lt Sabolewski's Lublin R.XIII being the first of many Polish observation planes (60% of the total lost) to be brought down by the indiscriminate Polish anti-aircraft fire. (14)

Overall, on the first day, the Armies Air Forces proved ineffective in repelling the German invaders both in the air and on the ground. The story was much more positive and optimistic with the Dispositional Air Force which had the advantages of early-warning and centralized control.

Dispositional Air Force: Pursuit Brigade

Operation Seebad ("Seaside") was to have begun at dawn with the launching of massive waves of bombers from the Luftwaffe airfields of East Prussia. However, the entire operation was delayed due to the thick fog along the Baltic coast. Most of the operations described above had already taken place before the first Heinkel took off for Warsaw. By then, the Polish observer corps was at its posts, fully alerted (15), and the fighter pilots were waiting anxiously in or near their PZL fighters on the campaign landing fields of Poniatow and Zielonka (16).

Finally the fog lifted, and Kampf Gruppe II/LG 1 got 30 He.111H into the air, escorted by Bf.110 of (Zerstörer) Gruppe I/LG 1. They were intercepted by 50 PZLs of the Pursuit Brigade (including 123rd Esk's P-7a). Fortunately, the Luftwaffe still clung to Goering's pet notion that the lumbering twin-engined "Zerstörer" was the only escort fighter (the Bf.109 was for defensive fighter patrols). These large, unwieldy fighters dived to meet the climbing PZLs. The P-11c of the 114th "Swallows" Eskadra and some of those from 111th "Kosciuszko" Eskadra wheeled about to keep the heavy German fighters occupied while the rest of the Brigade waded into the bomber formations (17). The Bf.110 did manage to break free of the tight turning Polish fighters and overhaul some of the slower P-7a, destroying two of them. The remaining P-11 of the 112th and 113th Esks, however, pressed their attacks with courage and determination, ignoring the defensive fire of the bombers. Lt. Aleksander Gabszewicz brought down the first enemy for the Pursuit Brigade. Another five fell in flames before the Germans had had enough, jettisoning their bombs and turning back (18). Two P-11c were lost to Heinkel defending fire and at least 20 were damaged (19).

The second wave of bombers, consisting of 30 more He.111 from II (Kampf)/LG 1 with more Bf.110 escort, got confused with 90 He.111P of KG 27 attempting to bomb Warsaw enroute to East Prussia from their original base near Hanover in Luftflotte II (a 470 mile journey).

Observer posts again alerted the Brigade and of the 51 remaining PZLs, 30 took to the air. Again Bf.110 proved useless in preventing a determined defender from getting to the bombers. Pursuit Brigade claimed that ten Heinkels fell in flames; however, only 6 can be confirmed. Nevertheless, both attacking formations were dispersed and turned away, with only three bombers getting anywhere near their target, jettisoning their bombs into farm fields well short of the target (20).

The concept of the Pursuit Brigade was totally vindicated in the first day of combat. The Brigade had turned away three major raids; not one had hit their target. With timely and accurate notification, and with the numbers to enter combat in strength, even with fixed-gear, open-cockpit fighters, the Polish pilots proved fully capable of effectively fulfilling their missions. At Geschwader and Luftflotte headquarters, Luftwaffe officers were scrambling to come up with a better plan. The direct approach certainly wasn't working; the loss of 12 bombers out of 150 sorties could not be sustained. On the Polish side, 123rd Esk, which had lost five of its ten P-7a on Day 1, was withdrawn from combat. The old and slow P-7a had contributed little, other than cannon-fodder, to the air battle and was considered too dangerous to fly in combat (21). Mechanics and armorers worked on the P-11 through the night to repair 24 damaged (of 38 remaining) P-11 (22).

The one other combat in which the Pursuit Brigade engaged on this day was OLT Bruno Dilley's afternoon raid on the Polish radio stations at Warsaw, Babia and Locy. The Pursuit Brigade again scrambled and found themselves in a hard turning fight with escorting Bf.110 and, for the first time, with the faster and more maneuverable Bf.109. LtCol Leopold Pamula, who had already had a He.111 victory to his credit, shot down one Stuka before the escorts got to him. He turned and rammed an attacking Bf.109 and baled out safely. Four other P-11c were lost, including Lt Gabszewicz's, who also baled out safely (23). Three more of the hapless P-7a were also lost in the battle (24). However, when the smoke cleared, the radio towers still stood. Their flexible masts merely recoiled from the near misses and the broadcasts about the Nazi onslaught continued (25).

Dispositional Air Force: Bomber Brigade

While it would be appropriate to end the first day's account as we began it, with OLT Dilley's exploits, we must also mention the other half of the Dispositional Air Force: the Bomber Brigade. It sat idle on its campaign landing fields near Deblin while the war raged to the west and to the north. The central leadership was unsure of how, or where, to employ their embryonic bomber force.

CHAPTER II

VISTULA STANZA

2-3 September 1939

Armies Air Forces: Army Krakow, Lodz, and Poznan

On the ground the Wehrmacht Army Group South made its first armored penetrations of the Polish lines at Wielun and Panki. The spearpoint, the 10th Army's XIV Panzer Korps with the 4th Panzer Division in the van, pushed through the hastily-prepared Polish field fortifications. Its geographical objective was Radomsko.

The medium bombers of Luftflotte IV spent the day completing their schedule of pulverizing known Lotnictwo Wojskowe airfields, while the Stukas turned to the more immediate ground support tasks. The Heinkels of KG 4 drove deep into Poland to bomb Deblin and two nearby campaign landing fields, one of them, Ulez, was the temporary home of Dyon X/1 of the Bomber Brigade. Eleven Polish aircraft were reported wrecked in the bombing, some of them by follow-up strafing attacks from the escorting Bf.110 of I/ZG 76. But, again, even at Ulez, no operational aircraft were lost (26).

The Stukas of Gruppen I/StG 2 and I/StG 76 destroyed the railway station at Piotrkow and the Polish infantry division that was unloading there. StG 77 attacked Polish troop columns near Radomsko, the focal point of AGS's 10th Army attack. Because of the volume of air activity, a total of 15 Luftflotte IV aircraft were shot down in isolated intercepts across the front on Day-2 and another nine on Day-3 (27). However, this represents less than one percent of the Luftwaffe's 1,700 sorties per day (28). Most of these victories were against the Hs.126 flown by German Army Co-Operation units (Aufklaerungs Gruppen) and the major raids went without interception by the Armies Air Forces fighter dyons. Lacking any form of early warning or centralized control, they were forced to engage the enemy wherever they found him; a largely ineffective method of air defense.

The most significant combat of Day-2 occurred when a dozen Zerstoerers of I/ZG 76 performed a fighter sweep over Lodz. They were met by half a dozen PZL P-11c of Dyon III/6 and were forced into a swirling, turning fight. The large, lumbering Messerschmitts could not bring their nose guns to bear and their rear gunners were hampered by the continuously changing geometry of the engagement. The P-11 got inside the larger airplanes' turning circle and sent two of them crashing to the earth. Two P-11 were lost (as was a third from each unit at another time this day) (29).

The Armies Air Forces P-23 Karas units continued to perform yeoman service reconnoitering advancing German columns. However, on Day-2 the situation had grown severe enough for the Army Krakow commander, General Szylling, to request offensive air support from the Bomber Brigade and to change the mission of his 24th "Assault" Eskadra from reconnaissance to ground attack. Six P-23B were dispatched against the advancing elements of the German 14th Army. They used standard Lotniczy Wojskowe tactics; attacking in three-ship formations, delivering their bombs from level flight at low altitudes. On this, the first offensive mission by the Polish Air Force, accuracy was lacking and the weight of effort was too small. The overall effect was negligible (30).

Armies Air Forces: Army Pomorze

The Polish corridor was the scene of the heaviest fighting of the early days. On the ground the Polish defenders, fighting facing both east and west, had actually repulsed attacks by the German 3rd Army advancing out of East Prussia. In fact, further east, the Army Group Narew "Podlaska" Cavalry Brigade launched a counter-invasion and captured a few small German villages in East Prussia (31).

On the west side of the corridor, the picture was not nearly so bright. General Heinz Guderian's XIX Panzer Korps (part of the German 4th Army) was achieving its initial penetrations of the Polish lines. Vainly, on the first day, the Army Pomorze commander, General Bortnowski, had thrown his "Pomerania" Cavalry Brigade against the approaching Panzers (32). Thus was born the sad scene of Polish lancers charging headlong into the serried ranks of German tanks.

In a desperation move, on Day-2, General Bortnowski attempted to do the same with his meager air power: he ordered the 141st Esk to attack the advancing tanks with their machine guns. Four P-11 failed to return, blasted from the sky by German flak. Three pilots were killed, including the Dyon III/4 commander, Capt Florian Laskowski (33).

Meanwhile, overhead, the 142nd Esk was reigning supreme in its own element, destroying six Luftflotte I aircraft for no loss (34). Lt Stanislaw Skalski claimed two Do.17, bringing his personal total to three kills in two days (35).

As with the other Armies Air Forces, the Assault and Army Co-op Eskadry of the 4th Air Regiment continued to perform their dangerous reconnaissance tasks under increasing difficulty. The attrition of these units was very high and Dyon III/4 was called upon to also perform reconnaissance missions (36).

By the end of Day-3, the Lublins, P-11 and P-23B reported that the German armor (XIX Pz Korps of the 4th Army) had sliced through General Bortnowski's front of four infantry divisions. To the east the German 3rd Army had overcome its initial difficulties and Army Pomorze was in a rapidly growing danger of being cut in two. In spite of the lessons of the previous day, on Day-3 General Bortnowski again had his P-11 out strafing German troops, this time attempting to stop them from building a bridge across the Vistula near Grudziadz. Overhead three of the Luftflotte I aircraft attempting to interfere were shot down, Lt Stanislaw Skalski destroying one Hs.126 and sharing in the destruction of another (37). This combat cost Dyon III/4 no losses.

Dispositional Air Force: Pursuit Brigade

The sparring forces of Operation Seebad, Kampfgeschwader of Luftflotte I and the Brygada Poscigowa of the Dispositional Air Force, spent the next 48 hours licking their wounds and rethinking their problems. On the campaign landing fields around Warsaw, mechanics worked through the night to bring a total of 33 fighters to serviceable status by dawn 2 September, and another six by the next day (38). Meanwhile, the Luftwaffe tacticians were still muddling over the solutions to the unexpectedly high losses that they experienced on their first day of combat in World War Two.

On Day-3, Luftflotte I mission planners proved that they had learned their lesson from the first day. The Heinkels crossed the front and flew in evasive, circuitous routes. The observer corps had difficulty in discerning the bombers' true direction and in anticipating their probable target. As a result, the central ground control held the Brigade on the ground until it was almost too late (39).

The PZLs were still struggling to get airborne and get to altitude as the He.111 droned over their campaign landing fields and the Bf.110 of I(Z)/LG 1 set upon them. The Zerstoerers had their best day of the campaign; the Brygada Poscigowa losing 5 P-11 for only one victory against the heavy fighters (40). Some of the defenders succeeded in reaching the bomber formations and brought down three for the loss of two to their defensive guns (a third was lost in a landing accident) (41).

Bombs fell on the PZL factory at Warsaw-Okecie (42) and the PZL-37B Los fitting-out depot at Malaszewice, destroying several of the replacement aircraft held at the latter by the 213th (Los Conversion Unit) Eskadra (43). Overall, though, the effect was far more psychological than physical. The PZL plant had ceased production from the first hours of the war and would supply no new aircraft to the Lotnictwo Wojskowe (44). On the other hand, the sight of German bombers raining high explosives on the heart of the nation was depressingly demoralizing.

Dispositional Air Force: Bomber Brigade

The Bomber Brigade saw action for the

first time one Day-2, the beginning of a relatively short but sharp flurry of flying and fighting activity. Answering calls for assistance from the Army of Lodz commander, General Rommel, 18 P-23B of Dyon IV/6 (formerly of Lvov) took off and attacked German armored columns thrusting through Polish lines towards Radomsko. The P-23 flew in three-ship waves into the hail of steel thrown up by the Panzers' protective flak batteries. Four Karas were blasted from the skies. A fifth fell to Polish army gunners and two more, badly damaged by flak, crash-landed short of their bases (45).

Despite the Luftwaffe's successful strategic foray against Warsaw on Day-3, the Polish High Command refused to launch their own twin-engined bombers against the enemy. The bomber force had been conceived specifically to fulfill General Rayski's dream of an offensive air campaign against East Prussian cities (a la' Douhet) (46). However, in the light of actual combat, the disheartening disconnect between Rayski's planning and Marshal Rydz-Smigly's execution became starkly evident.

As a result of the Luftwaffe raid on the Dyon X/1 bomber base at Ulez on Day-2, the unit was ordered to redeploy to another campaign landing field at Kuciny on Day-3. The unit's aircrews requested permission to bomb the East Prussian port-city of Koenigsberg as part of their flight to the new base. When the Polish High Command refused, members of the Eskadry came close to outright mutiny when the bombloads were removed to ensure that no unauthorized attacks would be mounted during

the move. Thus, the 36 PZL-37B Los, the weapon in which the Lotniczy Wojskowe had invested so much of its resources during the previous three years, sat idly by for the third day in a row (47).

Instead, Dyon II/2 (with the 55th Esk attached) was launched three times against German armor pushing towards Radomsko. Losses were heavy: out of 28 sorties flown, almost half were either shot down (five) or so badly shot-up that they crashed upon landing (seven) (48).

These airborne counterattacks failed to blunt the Wehrmacht advance and the Polish General Rommel scrambled to continue to place fresh troops in front of the assaulting armor. As quickly as they were deployed they would be chewed up, decimated and brushed aside. The Lotnictwo Wojskowe was no more able to stop the invasion than was the Polish Army. Map No. 1 depicts the approximate extent of the German advance at the end of the third day of battle.

SUMMARY

1-3 September 1939

By the end of Day-3, the Luftwaffe High Command considered the destruction of the L.W. to be complete. Surely the totals of aircraft wrecks seen on Polish airfields would have supported such a notion. On schedule, Luftwaffe units began to receive reassignment to other duties, usually ground attack missions in support of advancing army formations (49). KG 26 of Luftflotte I was redeployed to northwest Germany to begin attacks against the British North Sea Fleet (50).

On the Polish side, the fighting had been intense, especially for the fighter dyons at the front and around Warsaw. Tables 1 and 2 provide a unit and a daily summary of victories, losses, and remaining strength of these units.

TABLE 1

POLISH FIGHTER DYON OPERATIONS SUMMARY (51)
1-3 September 1939

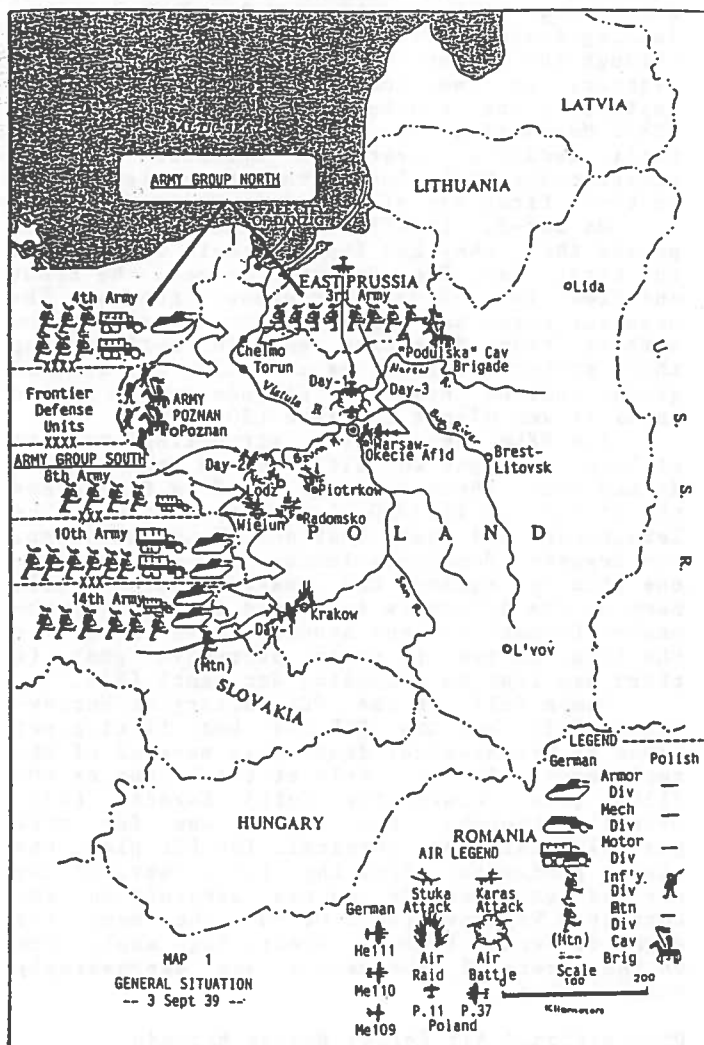
Units	Victories (Credited)	Losses	Strength Remaining
Pursuit Brigade	18	20	34
Army Modlin (152 Esk)	4	3	7
Army Pomorze (III/4)	11	4	18
Army Poznan (III/3)	10	3	18
Army of Lodz (III/6)	8	12	10
Army Krakow (III/2)	9	3	17
TOTALS	60	45	104

TABLE 2

DAILY SUMMARY OF VICTORIES CLAIMED (52)

Day	Armies Air Forces	Dispositional Air Force	Total
1 Sep	11	14	25
2 Sep	21	0	21
3 Sep	12	4	16
Totals	44	18	62

As will be noted, there is some discrepancy between the victory totals provided by Kowalski (Table 1) and those claimed in other sources. While Polish sources quote 60 to 62 kills, German sources admit the loss of 55 aircraft by the end of Day 3 (Aircrew: 71 KIA, 39 WIA, 94 MIA) (53).



In addition to the 46 PZL fighters, the Lotniczy Wojskowe had lost about 60 of its Assault (24 P-23B) and Army Co-operation (RWD-14 and R-XIII) aircraft. This was roughly a quarter of the L.W.'s strength at the outset of the campaign (54).

Although spared the humiliation of a massacre on their own airfields on the opening day, the Lotnictwo Wojskowe was experiencing the full horror of modern combat as one formation after another waded into the meat-grinder of German flak. At this rate, the Polish Air Force would cease to exist by 26 September.

[Editor's Note: This narrative will be continued in SAFO #53.]

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FOOTNOTES

Chapter I

1. Tony Wood and William Gunston, HITLER'S LUFTWAFFE, Crescent Books, New York, 1977, pg 14.
2. Peter C. Smith, THE HISTORY OF DIVE BOMBING, Nautical and Aviation Publishing Co., Annapolis, 1981; pg 59.
3. Christopher Shores, DUEL FOR THE SKY, Doubleday and Co., New York, 1985; pg 21.
4. "The Classic Heinkel: Part 3", AIR INTERNATIONAL, Vol 33/#4, October 1987, pg 177.
5. Francis K. Mason, WAR IN THE AIR, Crescent Books, New York, 1985; pg 30.
6. Smith, pg 60.
7. Tomasz Kowalski, "4th Pulk Lotniczy", SAFO, Vol 3/#1 (#9), March, 1978; pg 5.
8. Shores, pg 20.
9. Smith, pg 64.
10. Wood and Gunston, pg 14.
11. Shores, pg 21.
12. J. J. Halley, THE ROLE OF THE FIGHTER IN AIR WARFARE, Ziff-Davis Publishing Co., New York, 1978; pg 56.
13. LUFTWAFFE, Time-Life Books, Alexandria, 1982; pg 28.
14. Kowalski, pg 5.
15. Shores, pg 19.

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THE DASSAULT MIRAGE III, 1/72-scale injection-molded kit by Plastic Model Turkey (PM.004).

Like other offerings from the PM stable, this is a very basic kit. It consists of 35 parts, in a medium-grey, very-brittle, shiny plastic, plus a one-piece canopy, and a nice two-piece stand. Compared to scale drawings in AVIATION NEWS, the model is pretty accurate in outline; the only major profile flub is the ventral auxiliary tank which should be lengthened a couple of mm towards the rear.

The two-part fuselage fits the one-part wing pretty well; not much filler needed here. The kit's simplicity shows most around the intake and the cockpit. The intakes are just holes; no inside bulkheads or anything. The pilot's office consists of a seat positioned on locating pins, and that's all. Surface detail is very faintly-raised lines, but these hold up well under moderate sanding because of the hardness of the plastic. The landing-gear bays are simple indentation without detail and, in some places, without flooring. The landing gear assemblies are basic, but sturdy. Missiles and unguided bombs come with the kit, but the pylons are too thick. Thin Mirage-type fuel

16. "Messerschmitt's Strategic Fighter, the Bf.110", AIR INTERNATIONAL, Vol 30/#5, May 1986, pg 247.
17. Ibid.
18. Shores, pg 20.
19. Halley, pg 56.
20. Shores, pg 21.
21. Jerzy Cynk, "Blitzkrieg," AIRPOWER: June, 1983; pg 52.
22. Shores, pg 21.
23. Ibid.
24. Cynk, pg 52.
25. Smith, pg 61.

Chapter II

26. Shores, pg 21.
27. Ibid.
28. Matthew Cooper, THE GERMAN AIR FORCE, 1933-1945: AN ANATOMY OF FAILURE, Janes Publishing Co. Ltd., 1981; pg 98.
29. "Messerschmitt's Strategic Fighter", p 247.
30. Shores, pg 21.
31. Richard M. Watt, BITTER GLORY, Simon and Schuster, New York, 1979; pg 421.
32. ILLUSTRATED ENCYCLOPEDIA OF WORLD WAR II, Marshall Cavendish, London, 1981; pg 36.
33. Kowalski, pg 5.
34. Ibid.
35. Shores, pg 21, 26.
36. Kowalski, pg 5.
37. Ibid.
38. Cynk, pg 52.
39. Halley, pg 56.
40. "Messerschmitt's Strategic Fighter", p 247.
41. Shores, pg 22.
42. Halley, pg 56.
43. Shores, pg 22.
44. Cynk, pg 48.
45. Shores, pg 22.
46. Cynk, pg 36.
47. "The Elegant Elk, Poland's Unfortunate Bomber", AIR INTERNATIONAL, Vol 35/#4, October 1988, pg 217.
48. Shores, pg 21, 22.
49. Wood and Gunston, pg 14.
50. "The Classic Heinkel", pg 177.
51. Kowalski, pg 5.
52. Halley, pg 56.
53. Mason, pg 30.
54. Ibid.

tanks are included, and they look good.

The decals are no great shakes. One option is for a RAAF version with large yellow wing and fin triangles. The roundels are best replaced. The other markings are for a Pakistan Air Force Mirage. However, the PM kit does not include the ventral doppler radar bulge seen on every photo of a Pakistani Mirage; it wouldn't be difficult to add one to the model. If you can find the decals, this kit can be built in the colors of Argentina, Lebanon, and Venezuela. (Editor's note: The Carpena decals reviewed elsewhere in this issue should do nicely.)

While this model would be suitable for a beginner, the experienced modeler will want to add a lot of detail.

Since PM's mailing address is Turkey, the instruction sheet is in Turkish. The PM kit is probably the same as Pioneer 2's Mirage III offering which is listed as kit no. 4007. I have a PM Spitfire Vc and a Pioneer Spitfire Vc, and, except for the decals, they are identical.

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JNAF COLORS

NIPPON'S NAVAL AIR FORCE: JAPANESE NAVY AIRCRAFT COLOURS & MARKINGS IN THE PACIFIC WAR ... AND BEFORE, by Ian K. Baker, 16 Immarna Rd., Camberwell, Victoria, 3124, Australia. Price (including airmail): US & Canada A\$35.00; Europe: A\$38.00; New Zealand & Oceania: A\$30.00; Australia: A\$25.00.

Quick, now: what, exactly, did the designator "A6M5 Model 52" denote? Where can you find a quick reference list of Allied code names for WWII Japanese Navy aircraft? How were aircraft flying off the Hiryu marked? Why were many Japanese Navy aircraft cowlings painted black early in the war? What is the FS595a color match for the dark green used on aircraft based in China? The answers to these and thousands more questions about Japanese naval aircraft can be found in this book!

Ian Baker has written a very important book. It is, in my opinion, the most significant treatise on Japanese naval aircraft since Don Thorpe's work in the mid-1960s. If WWII Japanese naval aircraft are your interest, you need this book. If you only occasionally build Japanese naval aircraft, you probably need this book even more! Ian has done for this subject area what I tried to do for aircraft and armor colors in my IPMS Color Cross Reference Guide: assemble and explain in one place a great variety of useful material you'd otherwise have to get from many books and magazines - if you could find it all.

This limited run, softcover book contains 115 A4-size pages bound with a plastic spine. The first 65 pages describe in clear prose, tables and illustrations JNAF designation systems and aircraft names, national insignia, aircraft codes, markings, colors and camouflage schemes, and hobby paint mixes and matches. The second section, comprised of 66 pages, describes each JNAF aircraft and provides a representative top/bottom and side drawings showing color details and markings. He concludes with an excellent bibliography, which is itself useful for your own further research.

This is a great book - and a joy to read - from beginning to end. Please note Ian required payment in Australian dollars by bank draft or international money order. As mentioned above, it is a limited run book, so order early to insure you get as copy. You'll regret missing it!

David H. Klaus (SAFCH #891), 3404 Ramsgate Terrace, Alexandria, VA 22309.

SPACE SHUTTLE

DATAGRAPH 5: ROCKWELL INTERNATIONAL "SPACE SHUTTLE", written by Dennis Jenkins, is the most comprehensive and authoritative history of this immense and precedent-setting space vehicle yet published. All facets of the hardware program are given complete coverage, including the seminal work by the Sangers, numerous early design studies by the various competing aerospace companies, the construction program, the early glide and flight test missions, and the later operational flights. All four of the original "Shuttle" vehicles, as well as presently available information concerning the new, fifth vehicle, are covered. Tables summarize all flights to date, their mission objectives, and wherever security permits, information pertaining to their respective payloads. A brief synopsis of the final "Challenger" flight also is included,

along with an authoritative technical analysis of the accident. With well over 35,000 words of text, 8 pages of color, over 200 overview and detail photos, and approximately 50 drawings (including an outstanding 8-page fold-out), this book should remain the definitive reference on the pre-"Challenger" accident program for some time to come. 8-1/2" x 11", softcover, 72 pages."

Aerofax Inc., PO Box 200006, Arlington, TX 76006.

EAST GERMAN AIR FORCE 1954-1970

FLUGZEUGE UND HUBSCHRAUBER DER NVA 1956-1970, by Copenhagen. 160 pages, 23 cm by 16 cm. Hardbound.

This new publication describes NVA (German National People's Army Air Force) aircraft from 1956 to 1970. The first part (34 pages) describes the development of the East German Air Force. The most interesting sections are: First MiGs, Armament of Early Types, Guided Missiles, Ejection Seats, and Helicopters over the Sea.

The second part describes individual aircraft types. The coverage of each type consists of 2 pages of text, 2 or 3 b/w photos, one 3-view color drawing, and one color cutaway view. Many of the photos were new to me and some show interesting detail such as cockpit interior, engine detail, armament, etc. There are color 3-views of the following types: Yak-11, Yak-18, An-2, Il-14P(T), Aero 45S, L-60, An-14A, Il-18W, Tu-124W, Il-28, L-29 Delfin, MiG-15bis, MiG-15UTI, MiG-17F, MiG-19S, MiG-21F-13, MiG-21U, SM-1, Mi-4A, Mi-4M, and Mi-8T. An appendix contains a table with technical data for all aircraft described.

A second volume is promised and will cover the following aircraft: MiG-17 (ground attack), MiG-21 (later variants), MiG-23, Su-22, L-39, KT-04 (target), Z-43, L-410, An-26, Mi-8TB, Mi-14, and Mi-24.

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THE SINGLE-ENGINE LOCKHEEDS

REVOLUTION IN THE SKY: THE LOCKHEEDS OF AVIATION'S GOLDEN AGE, by Richard Sanders Allen, revised Ed., Orion Books, NY 1988, 255pp, heavily illus; \$27.95. (Originally pub. in 1964 and 1967 by Stephan Greene Press, Brattleboro, VT, 232pp.)

This excellent history of the single-engined Lockheeds which broke so many records is once again in print, with even more photos, drawings, and information than in the original editions. Although obviously of great interest to civil-aviation buffs, "Revolution in the Sky" also contains much material on the 14 Orions, one Sirius, and one Vega supplied to the Spanish Loyalists. It also explains how Lockheed designs influenced the Czech Avia 51, the German Heinkel He 70, and the British Airspeed Envoy which also participated in the Spanish Civil War.

For the modeler and illustrator there are new drawings illustrating more than a score of color schemes. Updates to the individual aircraft histories bring their stories to the present and add new details. Tables allow cross-referencing of the construction numbers, registration numbers, and names of individual aircraft so that any photo of a single-engine Lockheed can be quickly identified. Maps, (Continued on page 119)

SEPTEMBER CAMPAIGN

THE ILLUSTRIOUS SUPERNUMERARIES

When one thinks of the Polish aircraft that participated in the September Campaign, one naturally thinks of the P-11, PZL-23, and PZL-37. However, these were not the only aircraft that rose to defend the Polish homeland. An unknown number of aircraft, belonging either to the flying clubs or to private individuals, were used to supplement the observation and liaison units of the Polish Air Force. These aircraft were placed at the service of the Lotnictwo Wojskowe in accordance with the predetermined mobilization plans. It was not usual for a reserve pilot to report to his unit with his own aircraft. While most of these aircraft flew with their civil markings, it is confirmed that some carried the national chessboard crudely painted over their civil registration letters. It is not known why these letters were not fully overpainted; perhaps it was the lack of time. It certainly was not because anyone thought the civil markings would protect the aircraft. The Luftwaffe's "übermensen" were shooting at everything in sight - towns, villages, hospitals, and even people working in the fields. (The favorite target for the Ju-87 crews were the overcrowded roads, a predilection that branded the Stuka as the epitome of terror.) Based on this performance, they would not have hesitated at shooting at an unarmed plane carrying the civil registration letters "SP"?

The number of military liaison aircraft available to the Polish Armies was insufficient for their needs, a situation that was further exacerbated in the front line units by combat losses and in second line units by the transfer of aircraft to first line units. Pressed into service were military trainers, prototypes, aircraft built for export, and obsolete machines that had previously been been "set aside among the nettles" (i.e. "written off"). These machines joined existing operational flights or were used to form new flights.

RWD-8

One of the most popular civil aircraft of the 1930s was the RWD-8. This two-seat, parasol-wing aircraft was designed for the Department of Civil Aviation in 1932 by the DWL (Doświadczalne Warsztaty Lotnicze or Experimental Aviation Workshops), Poland's most successful manufacturer of civil aircraft. The Aviation Department's specifications were accurately executed; the RWD-8 was inexpensive to build, economical to operate, and easy to fly. The L.W. was interested in the RWD-8 as a successor to the obsolete Bartel BM-4s and Hanriot H-28 trainers used at that time.

License production by PWS enabled the quick delivery of the RWD-8 to both the civil flying clubs and the military training centers. In 1934, there were 26 RWD-8 in L.W. service, but by 1939 there were a total of 349 on strength. Civil aviation had 210 RWD-8 which were ordered by LOPP (Liga Obrony Powietrznej i Przeciwgazowej or Air Defence League) and were mostly used by private persons. The full story of the exploits of the RWD-8 in civil aviation would be very long; it is sufficient to note that around 600 RWD-8 were built in both its pws and dwl versions making the RWD-8 the most numerous-produced aircraft in the history of

Polish aviation.

About 350 RWD-8 were used by the Lotnictwo Wojskowe: 200 in military schools, 45 in liaison flights, and the others in the aviation cadet corps. On 22 August 1939, in response to the approaching war, 13 liaison platoons were formed with three RWD-8 in each unit (except platoon No. 8 which had 4 machines). All of these units were attached to tactical groups. While the RWD-8 was unarmed, it was ideally suited for liaison work because of its STOL characteristics that enabled it to operate from unprepared grass fields. To avoid enemy fighters, most of the missions were flown at low altitude. Unfortunately, this contributed to the loss of many aircraft by anti-aircraft artillery; all too often Polish guns.⁽¹⁾ Since the RWD-8 operated without fighter protection, many of the tasks undertaken were dangerous. Besides communication flights, medical missions, and observation of enemy ground forces, one of the most dangerous mission was searching for new airfields. These duties were usually assigned to the aircraft assisting the combat units. Among these was RWD-8pws SP-BBE [formerly used by the Lvov Flying Club (Aeroklub Lwowski)], one of two RWD-8 used by the 161 Fighter Flight. This RWD-8 crash landed on 11.9.39 while being piloted by plut.pil. Domagała. The second RWD-8 was mistakenly downed by Polish a/a fire on 3.9.39 in the Łódź area.

It is hard to believe, but the RWD-8 was also used as an assault plane. The light structure was unable to carry bombs, but the observers used light machine guns and hand grenades against infantry and trucks. The first such action probably occurred during the siege of Warsaw, sometime shortly before 26 September.

PWS TRAINERS

Another category of aircraft pressed into combat were the PWS-16, PWS-18, and PWS-26 trainers designed and built by Podlaska Wytwórnia Samolotów at Białka Podlaska. In peacetime, these aircraft were used as Type-II trainers, i.e. for transition from the Type-I trainers (RWD-8) to operational fighters (PZL P-11).

The PWS-18, called "Avros" in Poland, was a direct copy of the British Avro Tutor. They were built in Poland without an official licence agreement and only 40 were produced. These aircraft served with the military schools and with training units attached to the Air Regiments. Some of the "Avros" were still in service in September 1939, but it is impossible to say anything about their possible combat activities because of the complete lack of documentation.

The PWS-18 was followed on the production line by the PWS-16bis. (The PWS-16 had been designed in 1933 and 20 machines were ordered. An additional airframe, evidence number 59.21, was extensively modified by PWS to improve the arrangements in the cockpits and to provide easier access to the equipment for maintenance by ground personnel.) Twenty machines were built for the L.W. under the designation PSW-16bis and they were used for training aerial gunners. The next step was to adapt the 16bis

for dive bombing, inverted flight, full aerobatics, instrument flying, and horizontal bombing. This design was successful and the L.W. placed an order for 400 of these improved machines which were later designated PWS-26.

By mid 1939, about 310 PWS-26 had been built and almost all of these were operating in military colors. (Only a few were used by the flying clubs). During the September Campaign, they were used for liaison and reconnaissance missions. Although some PWS-26 were equipped with machine guns, the aircraft had no real chance against a real fighter. However, on 12 or 13 September, por.pil. J. Falkowski, an instructor at CWL Dęblin, was flying a PWS-26 when he was attacked by a group of Bf-109s. One of the more aggressive pilots tried to get this "easy" victim, but his Messerschmitt was less manoeuvrable than the PWS and, while trying to follow Falkowski's PWS-26, he crashed into the ground. The other fighters gave up the chase.

The PWS-26 became famous in the last days of the war in Poland. The Reconnaissance Air Platoon, which was formed on 25.9.39 by por.pil. E. Piorunkiewicz, operated with SGO "Polesie" (Samodzielna Grupa Operacyjna or Independent Operational Group) with gen. F. Kleeberg as C-in-C. The only equipment of this reconnaissance unit were two RWD-8, one PWS-26, and a few unserviceable Potez XXV (some historians add a PWS-16bis). The Platoon was the only "air force" of the Group. The flying personnel proved themselves with uncommon sacrifice and courage by attacking the enemy forces with hand-held machine guns and hand grenades. The Reconnaissance Air Platoon (also called the 13th Training Flight) was the last Polish air unit to flight in Poland. Gen. Kleeberg surrendered on 5 October 1939. (It should be noted that Polish forces on the Hel Peninsula held out until 11.10.39.)

POTEZ XXV

The first batch of French-built Potez XXV arrived in Poland during 1927-29, and in 1928 the first Polish-built Potez was test flown. About 300 Potez were built by Plage & Laśkiewicz by mid-1932. These machines were generally used for army cooperation duties (so-called "line" flights), but 10 were specially equipped for night-time flying (the "M2" version) and they were used as night escort fighters operating with the 1st Air Regiment. In 1936, the process of withdrawal had taken its toll and only about 100 machines remained with first-line units. The retired machines were not scrapped and most of them went to the training units and air schools. In late 1938, only 43 machines were operating with first-line units and 189 were at various schools. In 1939, about 150 Potez XXV (versions A2 and B2) were still at the training centers.

When the war began, at least 100 machines were based at Radziechów (north-east of Lvov). It is not known why such significant combat potential was not used during the hostilities. (The Potez had a much better performance than either the RWD-8 or Lublin R-XIII.) They could have been used for harassment operation, especially since the Luftwaffe had no night fighters at that time. Only a few reconnaissance missions were flown by the Potez. Of special note is the reconnaissance platoon from CWL-1 Dęblin. With only two machines of the B2 version (powered by Bristol Jupiter VII radial engines), they made flights over central Poland beginning in the first days of September. The unit was cooperating with Warsaw's Armored Motor Brigade and it flew the

Potez until 6 September. Eleven Potez XXV were also used by the Czechoslovak Reconnaissance Flight formed on 4 September. This unit operated over central and east Poland until 17 September, when it was interned by the Soviet Army in the Tarnopol area.

PWS-10

The PWS-10, from a similar time period as the Potez XXV, was the first Polish-designed fighter. The prototype made its first test flight in May 1930, and production took place between 1931-32. A total of 82 machines was built (including two prototypes). In the years 1931-1933, the PWS-10 was the main fighter of the Polish AF, but from 1933 on it was gradually replaced by the PZL P-7 and PZL P-11. They were then delivered to training units (as a Type-III trainer) or placed in reserve. (Fifteen of the reserve machines were sold to Spain where they were used as trainers at the Air School at Leon and later at Jerez de la Frontera. The last 11 of the Spanish machines were written off in 1938.) Most of the Polish PWS-10 were used by the Officers of Aviation's Education Center at Dęblin. However, these machines were held in rather low opinion; they were difficult to fly and they frequently caught fire in flight.

A number of PWS-10 survived until the outbreak of the war, but there is no confirmed information about any operational use. Approximately 10 machines were attached to the School of Piloting "Ujęź" - an improvised unit formed for the defence of Dęblin airfield. There are no reports of any PWS-10 combat; some departures were recorded in the first days of the war, but these were probably only test flights. It appears that the PWS-10 were never evacuated from Ujęź, for some of them fell into German hands.

BARTEL TRAINERS

At the time the war began, most of the Bartel training aircraft had been withdrawn for L.W. service, but an unknown number of survivors still served with civil schools and flying clubs. The BM-4 (mostly in the "h" version) had been produced until 1931-1932 when they were replaced by the RWD-8pws. Probably all BM-4h carried civil markings by 1939, but some mobilized machines received crudely-painted chessboards.

It is confirmed that a few BM-5d survived until 1 September. Twenty of these were assembled and modified in Dęblin in 1935 with the technical support of WP-1 plant. However, there is no information concerning the operational use, if any, of these aircraft.

RWD-17

Although the RWD-8 was a good trainer, the training centers continued to ask for more modern machines. Therefore, in 1937, the RWD-8 was developed into the RWD-17, and ten RWD-17 were built for civil aviation the next year. The first RWD-17bis, a float version of the RWD-17 which was later redesignated RWD-17W, was designed in 1938. This derivative was powered by a Bramo Sh-14a engine and had wooden floats built in the Glider Plant of A. Kocjan. The prototype, registered SP-BPB and named "Kolejarz Warszawski 12", had metal floats built by EDO of the USA. The prototype was also tested with land-type undercarriage, and all production RWD-17W were equipped for either floats or wheels.

In 1939, the Polish Navy ordered 5 RWD-17W. By 1 September, two of these had been accepted by the Navy's Management (Kierownictwo Marynarki Wojennej or KMW), but they did not reach the Navy base at Puck before the war began. The other 3 aircraft were ready for transfer to the Navy, but their subsequent fate is unknown. These 3 machines were probably destined for the River Flotilla at Pińsk, and it not impossible that some were evacuated to Romania.

The prototype SP-BPB was left at Puck after its tests, and on 1 September it was disassembled and hidden among the trees on the Hel Peninsula. On 30 September, shortly before the capitulation of the Polish forces on Hel, this aircraft was reassembled by two officers who hoped to use it for an escape to Sweden. Neither officer was a pilot, although one had flown gliders; the aircraft crashed into the sea, but the crew was rescued. Probably one civil RWD-17 served with the L.W. as a liaison aircraft during the September Campaign and others were evacuated to Romania.

RWD-13 and RWD-13S

A number of RWD-13S, an ambulance version of the popular RWD-13 touring plane, were purchased by the L.W. and two or three RWD-13 were used for executive flights. During the mobilization, the number in service was increased to about 30. All of these were operated with first-line units as courier, reconnaissance, and liaison machines. For example, Bomber Brigade had at least 2 RWD-13. Twenty-eight RWD-13 were evacuated to Romania (plus 3 RWD-13S) and they were later used by the Romanian Air Force.

An RWD-13 belonging to the Student's Flying Club in Gdańsk was mobilized and joined the MLD (Morski Dywizjon Lotniczy or Sea Air Squadron). (2) On 14 September, this machine, c/n 216, became the only Polish aircraft to make a successful escape to Sweden when ppor.pil. E. Jereczek landed it on the Visborg Plain, near Visby, on the Swedish island of Gotland.

LUBLIN R-XVib

The Lublin R-XVI (also designated R-XVIA) was designed as an airliner for the Polish Airlines LOT. However, it lost out in competition with the PWS-24 in 1933. The latter type was put into production and the R-XVI was written off in 1936. Plage & Laskiewicz continued development of the type, and SP-AKP, the "b" version prototype, made its first test flight in 1933. In June 1933, SP-AKP took part in the International Competition for Ambulance Aviation and won. This success inspired the PCK (Polski Czerwony Krzyż or Polish Red Cross) to order five R-XVib in 1934. These aircraft, completed in early 1935, received military evidence numbers 11.2 to 11.6 and civil registrations SP-AOH to SP-AOM (there was no SP-AOI). The dual registration was necessary because the aircraft were owned by a civilian organization and operated by the military. These same rules stipulated that ambulance aircraft could not carry military insignia.

All these machines were used until late 1936, at which time they were re-registered while retaining their previous evidence numbers. Unfortunately, it is not possible to reconstruct their new registrations: the only known example is 11.3 which became SP-BNO. It is also impossible to say anything about the operational use of the R-XVib during the war.

It is only known that the remains of 11.3 were found by German troops on a Polish airfield.

LWS-2

Probably the only Polish aircraft that was designed from the start as an ambulance aircraft was the LWS-2. The first test flight of the prototype took place in late 1937, and it participated in that year's Competition for Ambulance Aircraft. The aircraft gave a good account of itself and came in first. The PCK was going to order a batch of 6 machines, but the war intervened. The prototype SP-ATP was delivered to the L.W. in late 1938 and it was in service during September 1939. Its fate is not known.

NOTES

(1) The Polish anti-aircraft artillery operated successfully during the September Campaign. Unfortunately, many batteries had not received the albums containing up-to-date aircraft silhouettes before the outbreak of the war. Moreover, concern over 5th Column activities (diversions, sabotage, etc) was strong in Poland during the war. Both of these circumstances caused the a/a to open fire at every airplane that appeared.

(2) A Minister of Transportation directive of 7 April 1939 specifying the delivery of privately-owned aircraft to the Army in event of war included the following listing for Rumia Airport:

Owner	Type	Reg.	No. of Reg.
Gdańsk F.C.	MN-4	SP-AJO	186
Polish F.C.	RWD-5	SP-ALY	241
Gdańsk F.C.	RWD-8dw1	SP-ANB	254
"	RWD-8pws	SP-BAT	447
"	RWD-8dw1	SP-BKE	644
"	"	SP-BKF	645
"	RWD-10	SP-BLZ	706
"	RWD-13	SP-BML	693
"	RWD-10	SP-SPW	699

F.C. = Flying Club

No. of Reg. = Number in the Ministry of Transportation register.

FIGURES

Fig. 1. PWS-26 trainer, white "79", evidence number 81-185, under-wing code 79R. This aircraft is khaki overall (probably FS 30108/20122) except for the white (or light blue) fin with the SPL badge. The center section of the wing is probably white and the propeller is black. This machine served with CWL Dęblin.

Fig. 2. Another PWS-26 that served with the CWL Dęblin, black "61", evidence number 81.20, under wing codes probably 61R. All markings are black and the aircraft is silver overall except for the light blue fin (FS 35526?) and white center section of the wing.

Fig. 3. The official badge of the SPL (Szkoła Podchorążych Lotnictwa or Officers Flying School) was a stylized eagle (always applied facing in the direction of flight). This badge is presented in various colors by different authors. The letters "SPL" were certainly white, the middle part was probably dark grey, and the sections of the wings were separated by thick dark lines that may have been either red or black. The lower half of the wing sections were shaded, probably with light



YELLOW



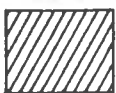
KHAKI



RED



BLACK

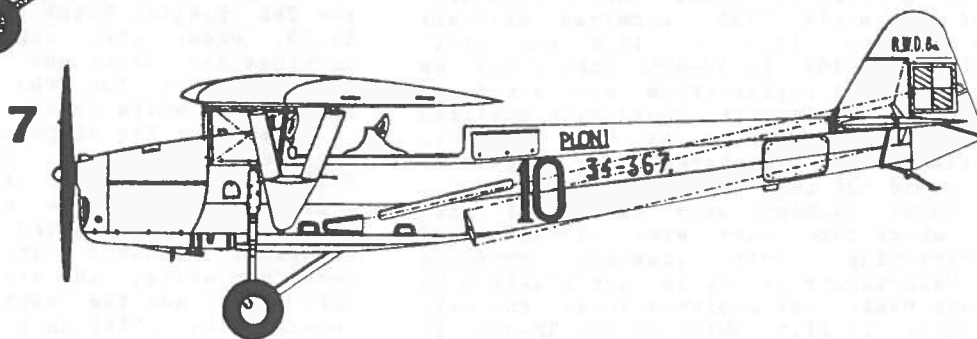
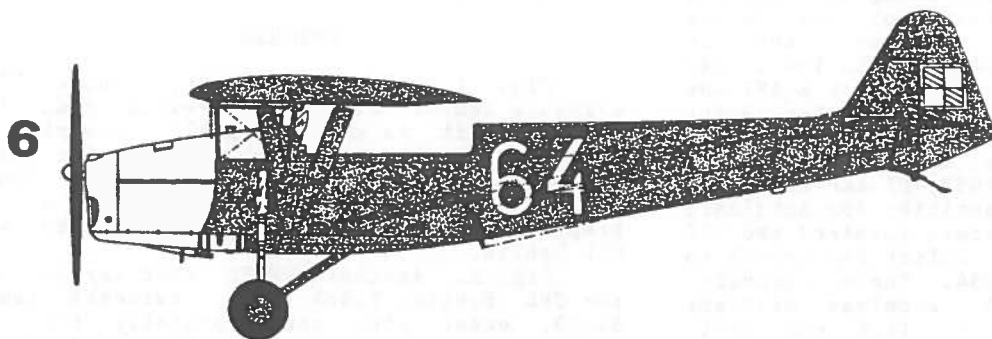
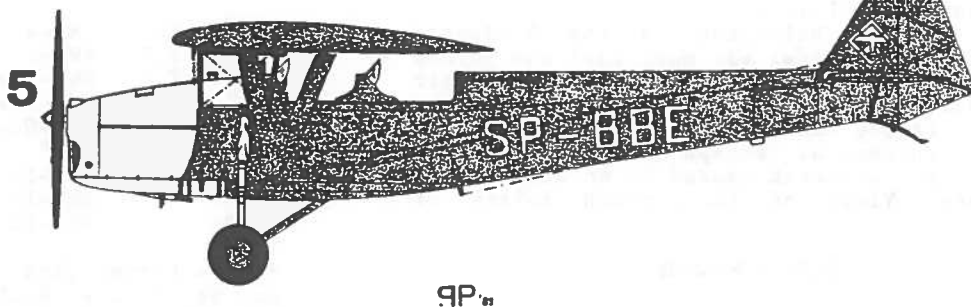
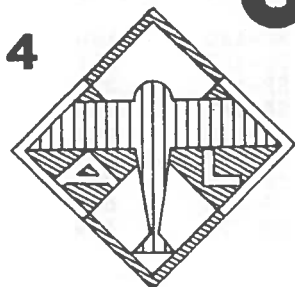
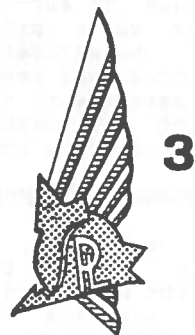
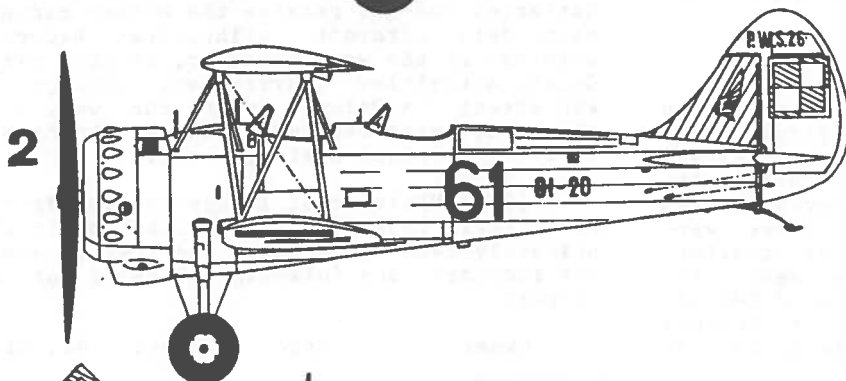
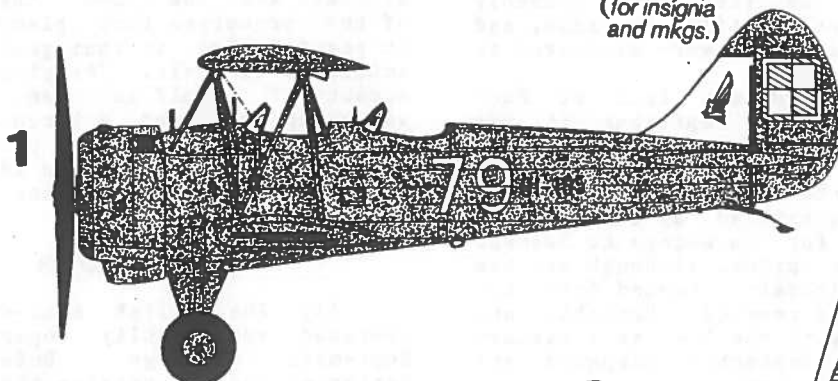


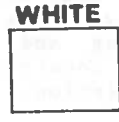
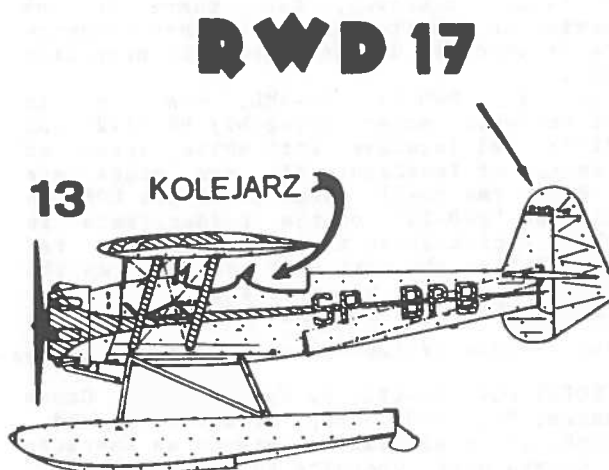
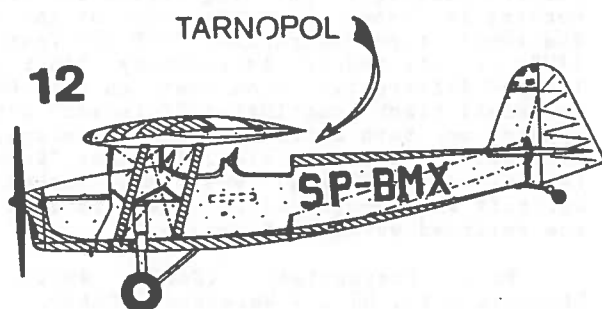
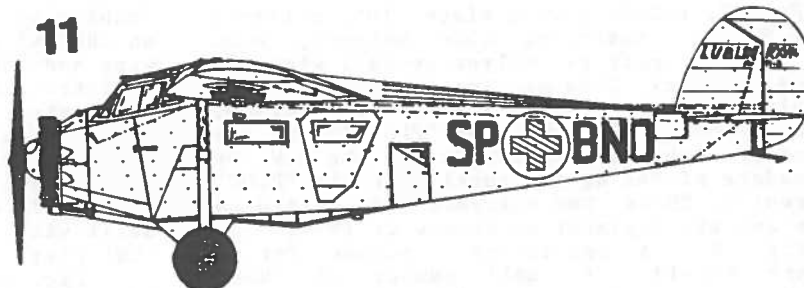
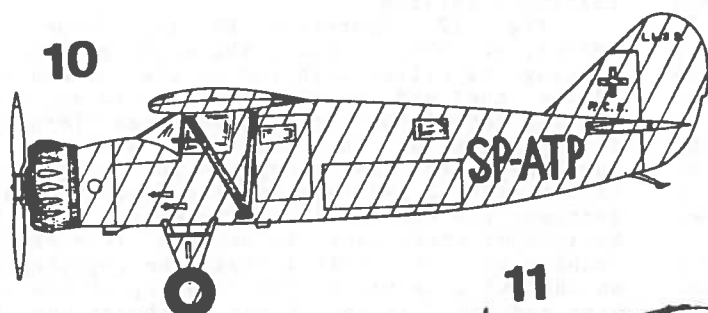
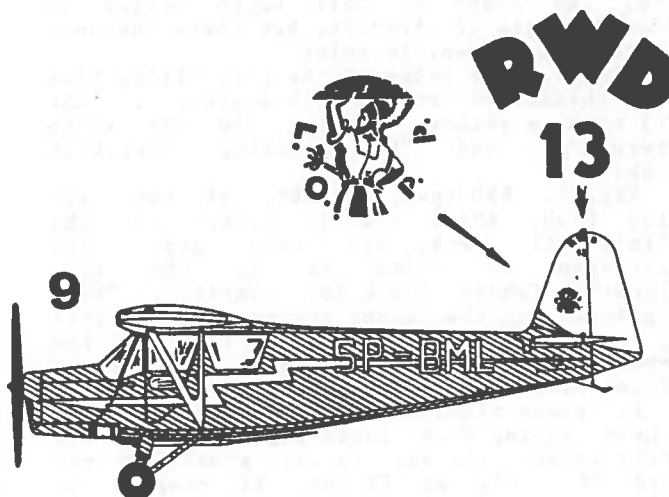
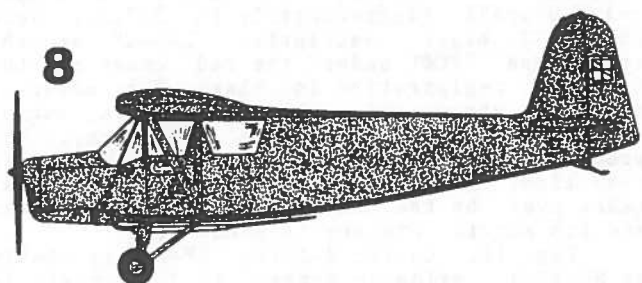
BLUE



SILVER
or
WHITE
(for insignia
and mks.)

See the DESCRIPTION
for precise colors!





grey. The remainder of the space seems to be white. The shape of this badge varied on different types of aircraft, but there does not seem to be any specific rules.

Fig. 4. The badge of the Lvov Flying Club was a chessboard (rotated 45 degrees to the left) with a yellow airplane and the white letters "A" and "L" denoting "Aeroklub Lwowski".

Fig. 5. RWD-8pws, SP-BBE, of the Lvov Flying Club. Khaki overall except for the cowl, oil tank, and main gear. The registration is white as is the type designation (shown black for clarity). "SP-" was painted on the upper surface of the port wing and "BBE" on the upper surface of the starboard wing. The registration on the lower surfaces of the wing is painted in the opposite way. In peace time, this aircraft was used by the Lvov Flying Club (note sign on fin), but shortly before the war it was mobilized and joined 161 Fighter Flight. It crashed on 11.09.39 while being flown by plut.pil. Domagała.

Fig. 6. An early RWD-8pws, white "64", evidence number 34.27, underwing codes 64D. This aircraft is painted the same as Fig. 5. The evidence number is black, the underwing code is white, and the insignia is carried in six positions, those on the upper surfaces of the wing being symmetrically positioned. It is possible that this aircraft carried the badge of the SPL on its fin on a background of unknown color. Note that this RWD-8 has narrow wings and no windscreen in front of the rear cockpit.

Fig. 7. RWD-8a (pws), black "10", evidence number 34.367, underwing code unknown, name "PLON I". Aircraft is silver overall with all marking in black. This machine and another RWD-8a (black "11", evidence number 34.368, underwing codes unknown, name "PLON II" in the same color scheme) were bought for the L.W. by the readers of the agricultural magazine "PLON" ("Harvest"). These two aircraft were delivered to the 2nd Air Regiment at Cracow in 1939.

Fig. 8. A conjectural scheme for a military RWD-13. A small number of these aircraft served with the Lotnictwo Wojskowe and probably all were painted khaki overall. A small chessboard would have been located on the rudder (size unknown), but there is no information on application of either evidence numbers or aircraft designations. The propeller is black.

Fig. 9. RWD-13, SP-BML, c/n 216, in typical red/white scheme (probably FS 11120 and FS 17925): red fuselage with white arrow on full length of fuselage, fin and wings are white. Note the small markings of the LOPP on the fin and "RWD-13" on the rudder (both in red). The registration is on the wings: red letters "SP-" on the port wing and "BML" on the starboard wing on the upper surfaces. The lower surfaces carried the letters in the opposite

way. The wing struts are white, but the undercarriage struts and gear are red. The propeller is black. This aircraft escaped to Sweden 14.09.39.

Fig. 10. LWS-2, SP-ATP, ambulance airplane. This machine was painted a creamy color overall (approximately FS 33727). Note the small black inscription "LWS-2" on the rudder and "PCK" under the red cross on the fin. The registration is black. The color of the wing struts and cowl is unknown, but on the photo they seem to be dark grey. The propeller is bare metal with dark (probably red) tips. This machine, the prototype, was taken over by the L.W. shortly before the war and its service history is unknown.

Fig. 11. Lublin R-XVib, SP-BNO (probably ex SP-AOJ), evidence number 11.3. Aircraft is silver overall with black lettering and red cross in a white circle. Note the small evidence number "No. 11.3" under the type designation on the fin. The wooden propeller is painted black. Damaged during the September Campaign and left behind by retreating Polish troops, this machine was repaired and put into Luftwaffe service.

Fig. 12. Prototype RWD-17, SP-BMX, in red/silver color scheme. The upper part of the fuselage is silver with red on the forward part of the cowl and on the lower surfaces, and a red top behind the cockpit. The name "Tarnopol" is in black on the starboard side of the fuselage under the cockpit. The wings were silver with 7 red rays running from the center section; the 4th ray is on the center line. The horizontal stabilizer is painted in a similar fashion but with only 4 rays. The registration on the wing is black; "SP-" on top of the port wing and "BMX" on top of the starboard one. The registration on the lower surface of the wing is painted in the opposite way. The propeller is black and the wing struts and undercarriage are red, and the gear silver. SP-BMX made its first test flight on 14.08.39. The name "Tarnopol" was used because the aircraft was built with funds donated by the citizens of that city.

Fig. 13. Prototype RWD-17W, SP-BPB, named "Kolejarz Warszawski 14" in red/silver color scheme. A red stripe runs along the silver-painted fuselage, the wing struts are red, but nothing is known about the color of the wings. The small type designation "RWD-17" (not "RWD-17W") on the rudder is probably black and is located differently from that on the RWD-17. The small black inscription "Kolejarz" probably appears on both sides of the fuselage, but certainly on the port side. The name "Kolejarz" (a railroad employee) was used because the aircraft was bought using contributions from the railroad workers of Warsaw.

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TROPHY FOR EAGLES, by Walter Boyne, Crown Publishers, NY, 1989, 455pp, \$19.95 hardbound.

Although an air battle between an American and a German over Guernica on 26 April 1937 begins and ends the narrative, the story spans the ten previous years of the Golden Age of Aviation. It opens with real and fictitious characters attempting to fly from New York to Paris in May 1927, and follows them through other air races, arms trading and aircraft demonstrating in several countries, the development of commercial aviation, and the approach of World War II.

As in Ernst Gann's 'Gentlemen of Adventure', real and fictitious aviatrixes play significant roles along with the men. Boyne's descriptions of Charles Lindbergh, Amelia Earhart, Howard Hughes, Ernest Udet, and others are as interesting as the characters he invents. His flying sequences are even better.

Inter-war buffs will be fascinated by this well-written tale set in an important era of aviation history sometimes neglected in fiction.

Tom Sarbaugh (SAFCH #497), #21 Live Oak Rd., Berkeley, CA 94705.

SEPTEMBER CAMPAIGN

THE SUPPORTING CAST

Transport aircraft, both military and impressed civil airliners, did not contribute significantly to the Polish Air Force's efforts during the September Campaign.

Some of the more obvious reasons for the disappointing showing by military transports were the large number of transport aircraft that were either destroyed or damaged during the initial attacks by the Luftwaffe and, later, the great difficulty in operating with a complete lack of fighter escort. However, the main reason for the transport aircraft to keep the first-line units supplied with ammunition, spare parts, and fuel was the complete lack of prewar planning. Within the Polish Air Force, there was no transport unit as such; all transport aircraft were allocated to the individual Air Regiments.

FOKKER TRIMOTORS

The numerically most important transport aircraft in the PAF was the Fokker F-VII/3m. These wood and fabric aircraft had been built under licence by Plage & Laśkiewicz in Lublin. The first 20 machines off the P & L production line were built as bombers and the remaining 11 as civil airlines. All were built in 1929 and they were given military evidence numbers 70-01 to 70.31 in recognition that, in the event of war, the civil machines would be immediately mobilized.

In spite of the fact the military Fokkers were obsolete already in the early 1930s, they were kept in first-line service until 1938. However, as early as 1935, the Fokkers were an embarrassment to the Polish Air Force. The publication of photos or information about the F-VII was, putting it mildly, not very welcome. This embarrassment was removed when the first PZL-37 joined the Air Force; immediately all Fokkers were "demoted" to the role of transport machines.

One of the more interesting pre-war "actions" by the Fokkers occurred in the summer of 1939. As an exercise for the aerial-defence and civil-guard units in Warsaw, the Fokkers, PZL-23, Breguet XIX, and Lublin R-XIII took part in the simulated bombing of the capital. The authorities purposely omitted the PZL-37 because the P-7 and P-11 fighters would simply not have been able to intercept this modern "adversary". The sight of lumbering Fokkers being harassed by fighters would do much more for the residents' sense of security.

At the outbreak of the war, 12 Fokkers were still serving with the Air Force; 3 were with the WOS (Wojskowy Ośrodek Spadochronowy or Military Parachuting Center) and 9 were allocated to Bomber Brigade. The WOS's Fokkers were heavily damaged on the first day of the war, but the Fokkers with the Bomber Brigade were successfully used to carry fuel, ammunition, and spares. Unfortunately, these slow, unarmed aircraft were an easy morsel for the German fighters. On 5 September, two F-VIIs were attacked and destroyed while flying from Kuciny to Ujęź. At least 5 military Fokkers were evacuated to Romania.

THE RELUCTANT BISON

It is completely inexplicable why the LWS-4 Zubr (Bison) bombers were not used in action

against the invaders. On 1 September, 5 LWS-4 were based at Małaszewicze, one at Lublin, and 10 at Dęblin (probably including the LWS-6 prototype). All the aircraft at Małaszewicze were destroyed or damaged by Luftwaffe bombers, but the Zubr at the other locations were almost untouched. The Zubr was able to carry up to 660 kg of bombs - the same as the Karaś - but the Karaś was used exclusively as light bombers despite of their unsuitability for such a role. The LWS-4 was a poor bomber, but it was quite good at "holding the air", it was easy to fly, and its behavior during flight was quite correct.

A single LWS-4 escaped from Małaszewicze to Romania. It is said that this machine was flown by a noncommissioned officer of the technical service who, although not a pilot, had become familiar with the aircraft by watching the pilots. Other ground personnel were on board for this flight, but none held a pilot's licence. Although this story is not confirmed by official sources, there is other evidence of the good flying characteristics of this ugly beast. All the Zubr that fell into German hands were transferred to Germany, where they were used by the Blindflugschule at Schleissheim from 1942.

LOT GOES TO WAR

According to the prearranged plans, all aircraft of LOT Polish Airlines were handed over to the Lotnictwo Wojskowe as soon as mobilization was announced. Among these were two PWS-24bis (former airlines converted to photo aircraft) SP-AMP and SP-AMS. The first of these crashed near Brześć and the latter ultimately escaped to Romania. LOT was also using the most modern airlines of the time - the Douglas DC-2. None of these saw combat: SP-ASK was interned in Riga and SP-ASL was interned in Bucharest. The single Junkers Ju-52/3mge airliner, SP-AKX, shared SP-ASL's fate in Romania.

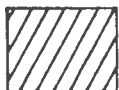
THE SAGA OF THE ELECTRAS

The two most numerically important airlines used by LOT were the Lockheed L-10A Electras and L-14H Super Electra. All but two of the L-10As (which were damaged and had to be left behind in Poland) were interned in Romania.

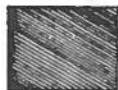
From 1 to 5 September, the Super Electras were used for long-distance, diplomatic missions. The destinations for most of these flights were Athens, Lydda (Tel Aviv), and Cairo. After the 5th, the L-14H were used in Poland on transport duties. For example, on 12 September, a L-14H piloted by kpt.pil. L. Tokarczyk delivered ammunition to Polish troops surrounded near Kutno. In the end, four L-14H were interned in Romania, one in Estonia, and three escaped to England via Helsinki and Stavanger. These latter were still carrying their Polish registrations SP-BNF, SP-BPM, and SP-LMK when they saw action during the fighting in France and SP-BPM was destroyed in Paris in June 1940. The remaining two aircraft were taken over by the BOAC. SP-BNF was re-registered G-AGBG and was used for communication flights between the UK and Sweden carrying the name "Bashful Gertie, Terror of



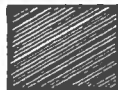
KHAKI



LIGHT
BLUE
GREY



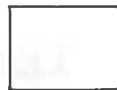
RED



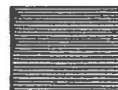
BLUE



BLACK

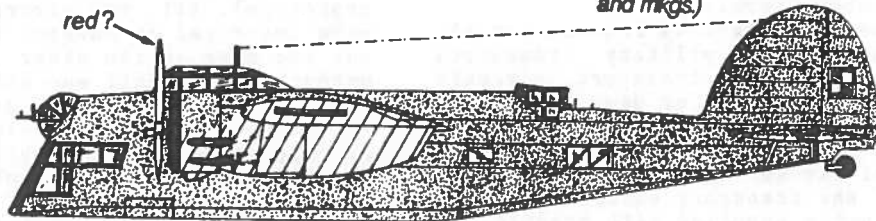


BARE
METAL
or
WHITE
(for insignia
and mks.)

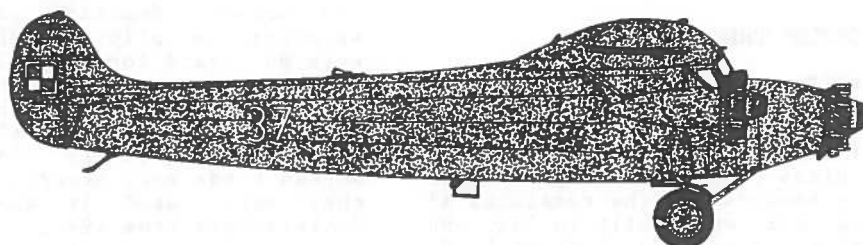


BRONZE

1

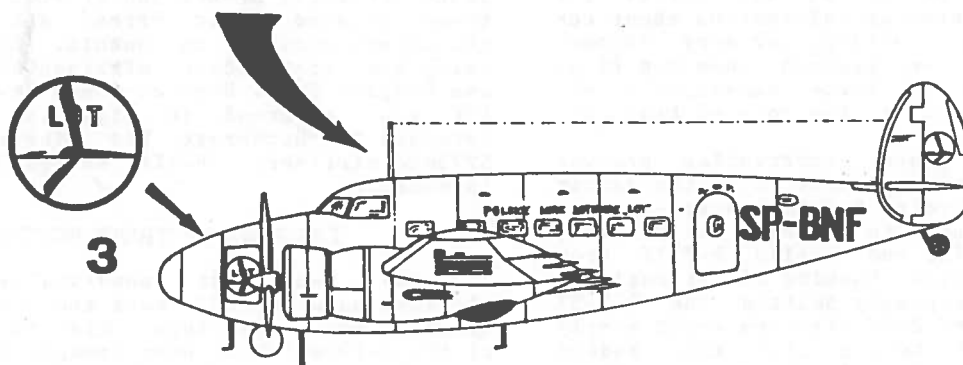


2



POLSKIE LINIE LOTNICZE „LOT”

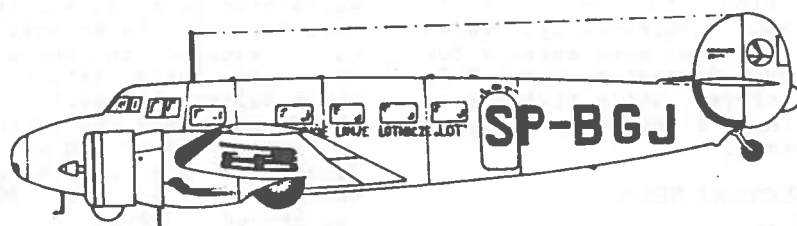
9P. 48



3

POLSKIE LINJE LOTNICZE „LOT”

4



the Skagerrak". This machine survived the war and was sold to one of the Scandinavian countries in 1951.

A POLISH GALE

One of the more interesting Polish pre-1939 aircraft designs was the PZL-44 Wicher (Gale) airliner. On the first day of the war, the prototype, registered SP-BPJ, was evacuated to Lvov. Because of undercarriage failure, it remained at Skniłów airfield, until it was captured by the Red Army. It was repaired and flown to the TsAGI Institute in Moscow for testing. It probably did not survive for long; according to unconfirmed reports, it crashed soon after its arrival in Moscow.

Paweł Przymusiaka (SAFCH #801), ul.
Długosza 8/27, 01-174 Warszawa, POLAND.

FIGURES

Fig. 1. LWS-4/PZL-30 "Zubr" in typical camouflage consisting of khaki on the entire fuselage and the upper surfaces of the wing and horizontal stabilizer, with light blue-grey on the lower surfaces of the wing and horizontal stabilizer. Chessboards are carried in six

positions, probably with asymmetrical positioning on the upper surfaces of the wing. No other markings are known.

Fig. 2. A Polish-built Fokker F-VII/3m, white "37", evidence number and underwing codes unknown. This machine wore the color scheme typical of second-line aircraft, khaki on all surfaces. Chessboards are carried in six positions and were symmetrically placed on the upper surfaces of the wing. Note the small white type designation "Fokker VII" and the miniature evidence number "No. 70..." painted on the rudder. This machine served with a unknown unit and was damaged, probably at Dublin-Irena airfield.

Figs. 3 & 4. Polish Airlines LOT, Lockheed L-14H "Super Electra" SP-BNF and Lockheed L-10A "Electra" SP-BGJ. Both machines are bare metal with black inscriptions and LOT logo on the rudders. Note the difference between the word "linie" on these aircraft. The LOT insignia is painted on the nose of the "Super Electra" in black along with "LOT" in blue. SP-BNF successfully reached England and was later taken over by the BOAC. SP-BGJ was damaged and abandoned near Kolomyja.

-reviews-reviews-reviews-reviews-reviews-reviews-reviews-reviews-reviews-reviews-reviews-

(Continued from page 110)

specifications, construction details, and a bibliography enhance the well-written text. Very highly recommended.
Tom Sarbaugh (SAFCH #497), #21 Live Oak Rd., Berkeley, CA 94705.

LATVIAN AVIATION HISTORY

OF STRUGGLE AND FLIGHT, Karlis Irbitis. "A truly unique publication presenting the dramatic history of aviation in Latvia. Little-known in the West, the Latvians produced many remarkable aircraft under difficult logistical and political conditions, all carefully documented by an aero engineer (and model builder!) who was there. Are you interested in obscure aircraft? Here they are, presented in 3-views, sketches, specifications and photographs. A high-quality, hard-cover publication with full color dust-jacket. Twenty-five 3-view drawings, 8-3/4 x 11-1/4 format, 211 pages." \$28.50 plus postage from Hannan's Runway, PO Box A, Escondido, CA 92025.

[Editor's note: When this book was first published, I tried several times to contact the publisher to get information on where to purchase it, but I never received an answer. The book has finally shown up on somebody's book list. It's a great book, and the price is reasonable. Buy it before it disappears again.)

AUTRO-HUNGARIAN AIR VICTORIES

LUFTSIEGE DER FLIK 1 1914-1918, OFH Nachrichten Sonderheft 17, Schroeder & Totschinger. 22 pages. Austrian Aircraft Historians, Kannegasse 1, A-1150 AUSTRIA.

"With this new OFH Special we want to start a new research work to the History of the Austro-Hungarian Air Service, the k.u.k. LFT (Luftfahrtruppe) in World War I 1914-1918: 'The Air Victories gained with the Fliegerkompanien'."

Each air victory of Flik 1 is described: the date, the pilot and observer (if applicable), the type and serial of aircraft being flown, a description of the action

(usually containing the nationality and type of aircraft destroyed), and a side-view drawing of the victorious aircraft is included in many cases (22 victories are described; 9 aircraft are profiled).

Most of the action occurred on the Eastern front between Albatros B.I and Brandenburg C.I against Russian and Romanian aircraft. The last 3 victories are by Berg D.I against Italian and British aircraft.

This little monograph could be the beginning of an exciting research project. Maybe with the help of people outside of Austria they could add side-view drawings of the victims as well as the victors.

WW2 JOURNAL

WW2 JOURNAL, 102 pages, 8.5 in. by 11 in. Merriam Press, 218 Beech St., Bennington, VT 05201. \$10.00 USA, \$12.50 others.

"Enclosed are copies of the new WW2 JOURNAL booklet series. This replaces the previously planned WW2 JOURNAL monthly magazine.

"I went through three false starts with the WW2J magazines since last summer. The first never really got off the layout board for many reasons; the second and third were both done in by a total lack of sales support and the realization that the high cost of offset printing these days would require either a major source of funding (highly unlikely) or a deluge of subscription order right at the start (highly improbable).

"The only recourse was to produce the material in this format and offer the 'issues' as individual booklets. As you can also see, customers may purchase copies of those articles they are interested in, so those with very specific interests won't be forced to purchase the whole booklet just to get the information contained in a few pages."

Ray Merriam (SAFCH #187), 218 Beech St., Bennington, VT 05201.

[Editor's note: See the review of aviation material contained in these issues in our "abstract" column. These issues also contain many articles of a non-aviation bent.]

AVRO ANSON

THE ANSON FILE, Sturtivant, I.S.O., and Air-Britain (Historians) Ltd. publication (Sales Department, 41 Penshurst Road, Leigh, Tonbridge, Kent, TN11 8HL, England. Members £ 15; non-members £ 22.50.)

This large-format (approximately 8 in. by 12 in.), 352-page hardbound Air-Britain publication, dedicated totally to the Anson, is one of the finest pieces of work of its kind that I have had the pleasure to examine. The photos, which abound, are very well reproduced and, as may be expected, include a wide variety of FAR and Commonwealth air force subjects, as well as many British and Commonwealth civil operators. But, SAFCH members will also be interested in the photos of Belgian, Afghan, Egyptian (including King Farouk's VIP Anson), Estonian, Ethiopian, Finnish, French Air Force and Navy, Greek, Iraqi, Irish, Israeli, Dutch, Norwegian, Portuguese, Turkish, and USAAF examples as well as no fewer than 11 pages of left-side views showing a wide variety of RAF, Commonwealth, foreign and civil schemes to a very high standard. One of my favorite photos is the South African Air Force Anson I (3158 'RB-Z' of No.35 Sqn.) mounted on floats for non-flying sea-plane handling training! The extremely detailed tables of each and every Anson detail known data on squadron use and disposition, with a great deal of unit code data.

Author Sturtivant has obviously issued a labor of love, and it can only be hoped that further such treatments of "those that also served" can be expected in the future. The Cessna T-50 Bobcat series comes to mind, as well as the Beech 18 series. Highly recommended."

Dan Hagedorn (SAFCH #394), presently between addresses.

SEVERSKY P-35

SEVERSKY P-35/P-35A, 1/72-scale injection-molded, Meikraft Models, Preston Hollow Center, 4343 West N.W. Highway, Suite 1001, Dallas, TX 75220. \$12.95.

The Seversky P-35A is probably the most important WWII fighter still absent from the list of 1/72-scale kits produced by the major manufacturers. While the major companies continue to ignore this aircraft in favor of more Bf-109Es, a creditable kit is available from Meikraft. Molded on a single spur of light grey plastic, this kit shares all the problems associated with short-run kits: heavy gates, abundant flash, and mushy surface detail. While this kit is not up to the standards of Huma (who is) or even Aeroclub, it should not be difficult for the experienced modeler to make a very nice model of the P-35. Careful removal of the flash should preserve the lightly inscribed surface detail which can then be improved by judicious rescribing. The engine and propeller can probably be used, but I would suggest replacement by suitable cast-metal parts from Aeroclub.

Cockpit interior is minimal, consisting of floorboards, seat, rear bulkhead, and an instrument panel molded in clear plastic. I'm not sure what to make of the latter, or of the etched-brass instrument panel; they may save some work for the super-detailer (I fail to see how), but they will not be used by the average modeler. Two cockpit canopies are provided, one closed and the other in three sections to allow display in the open position. The canopy

molding is reminiscent of early-Revell; thick and not especially clear. The decals, by Super Scale, are excellent and provide the markings for the 17th Pursuit Sqn. P-35A '4MP 17' flown by Buzz Wagner from Nichols Field, Philippines, 1941.

The 6-page instruction sheet provides a detailed history (is this necessary?), a very useful 16-item annotated reference list, and indifferent, but sufficient, exploded view and drawings.

Alternate parts (cowling, air intakes, and gun blisters) are provided for the P-35A (or Swedish EP-1) and the instruction sheet describes the steps necessary to lengthen the fuselage. This latter will not be easy, and I would have preferred to give up the etched-brass parts and alternate canopy for an alternate fuselage for the 'A' version.

The Meikraft kit of the P-35 provides the bases upon which the experienced modeler can make a good model of the P-35, or, with a lot more work, a P-35A or EP-1. However, it is not sufficient reason for us to stop asking Monogram and Academy/Minicraft for a kit of the P-35A.

DE HAVILLAND DH-9

DE HAVILLAND DH.9 CONVERSION, 1/72-scale injection-molded by Blue Rider Models, 43A Glasford St., Tooting, SW17 9HL, England. \$12.98.

In spite of the fact that it was not successful with the RAF, the DH-9 found its way into service with a large number of small air forces, including Poland, Estonia, Latvia, Spain, Ireland, Belgium, Switzerland, Greece, Turkey, Romania, etc. In keeping with Blue Rider's penchant for the exotic, they have produced a nice kit for converting the recently re-released Airfix kit of the DH-4.

This conversion kit comes in two version, identical except for the instruction sheet and decals. One set allows the aircraft to be finished in the markings of the RAF (2 versions), Poland (2 versions), Spain (Nationalist), or Ireland. The other (denoted "Special Edition") contains decals for one Belgian and one Swiss aircraft. The decals and instruction sheets in each version are up to the usual high standards we have come to expect from Blue Rider.

The parts these kits share are nicely-molded fuselage halves with crisply inscribed panel lines and surface detail, and a collection of beautifully-molded, almost flash-free, cast-metal parts. These latter include a superb engine, 2 types of exhausts, propeller, radiator, gun ring and mount, and 2 types of machine guns. All other parts come from the Airfix kit.

Decals for the Estonian DH-9 are also available from Blue Rider (see review elsewhere in this issue). These kits, and other conversion kits from Blue Rider, are available (or will be as soon as I can restock) from the SAFCH Sales Service.

AVIATIK-BERG D-I

AVIATIK-BERG D.I, 1/48-scale vacuform kit by Sierra Scale Models, PO Box 1, Challenge, CA 95925. \$19.95.

Molded on one sheet of thick white plastic and included in a bag of cast-metal parts are all the basics necessary to build an
(Continued on page 126)

SEPTEMBER CAMPAIGN

RED WIND RISING IN THE EAST

POLISH EAGLES vs RED FALCONS

At 0330 on 17 September 1939, the Soviet vice-minister of Foreign Affairs, A.N. Potiomkin, called the Polish ambassador in Moscow, W. Grzybowski, and gave him a diplomatic note that was, in effect, a declaration of war. At 0600 that same morning, Soviet troops crossed the Polish border along a 600 mile front.

The Soviet High Command of the Red Army sent two groups of armies against the Poles: In the north, on the Belorussian Front, under the command of Commandant of the Army 2nd Class M.F. Kovaliew, were the 3rd, 10th, and 11th Armies, the 4th Motorized-Mounted Group, and the 23rd Independent Infantry Corps. In the south, on the Ukrainian Front, commanded by Commandant of the Army 1st Class S.W. Timoszenko, were 5th, 6th, and 12th Armies. Each Army had the support of a aviation brigade consisting of 2 or 3 air regiments. Altogether the Red Air Force sent some 400 to 500 aircraft against Poland.

The types of aircraft used against the Poles by the Soviets in 1939 were: Fighters - biplane Polikarpov I-15bis (I-152) and I-153, (and maybe a few obsolete I-5 and I-15), and monoplane Polikarpov I-16 types 10 and 17. Recce and light bombers - Polikarpov R-5 and R-Z and probably Neman ChAI R-10. Bombers - SB-2M-100A and SB-2M-103.

Already reeling under the onslaught of the Luftwaffe from the north, west, and south, the Polish Air Forces units were being gathered in south-eastern Poland near the Romanian border preparing a defensive perimeter in which to await new equipment purchased from France and Great Britain (160 Morane Saulnier MS-406-C1 fighters, 100 Fairey Battle Mk.I light bombers, 9 Hawker Hurricane MkI, and one Supermarine Spitfire MkI). Hurricanes were already on board a British ship bound for the Romanian harbor in Constanza.

At the time of the Soviet invasion, Polish Air Force units had available some 100 aircraft. However, aviation fuel was in short supply and many planes were damaged and there were no spare parts. A few units had even been separated from their ground crew.

AIR ACTIONS OVER THE EASTERN FRONTIER

On the morning of the 17th, the commanding officer of the Polish Air Force, Brigade General J. Zajac, ordered recce flights over the Polish-Soviet border. 112 Fighter Squadron of the Pursuit Brigade, stationed at Denysów (see map) dispatched two aircraft flown by Lieutenant W. Łapkowski and Sublieutenant W. Łokuciewski. Unfortunately, nothing is known about this mission. (In May 1989, the author questioned Colonel Łokuciewski about this flight, but he didn't remember any details. This may indicate that no Soviet troops were found.) Major E. Wyrwicki (Chief of Staff of the Pursuit Brigade) dispatched two pilots from the airfield at Petlikowice; Sublieutenant S. Zatorski of 113 Squadron searched the Volhynian section of the border and Officer Cadet W. Miksa of 114 Squadron patrolled the Podolian section to the river Zbrucz (see map).

At 1000 that morning, observers in Rokitno saw a lone Polish PZL P-11 fighter drop a message at the barracks of the KOP (Korpus

Ochrony Pogranicza or Border Guard Corps). This aircraft was then attacked by three Soviet monoplane fighters (I-16?). The Polish pilot managed to damage two of the attacking fighters sustaining damage in return and it crash landed near Sarny (see No. 1 on map).

Officer Cadet W. Miksa discovered Soviet mounted and motorized units advancing into Polish territory. He flew at low level over Soviet troops and alarmed horses and successfully avoided Soviet machine-gun fire. Officer Cadet W. Gnyś, who had shot down the first German aircraft destroyed in WWII while flying with 121 Squadron (of the 2nd Air Regiment later incorporated into the Pursuit Brigade), searched the Czortków area. At 1000, Sublieutenant T. Koc, from 161 Fighter Squadron, shot down a Soviet Polikarpov R-5 recce plane over the village of Nadwórna (see No. 2 on map).

From the airfield at Uzyniec, the 24th Recce Squadron of the PAF dispatched an aircraft (Sublieutenant-Observer F. Sobieralski and Pilot Officer Cadet G. Ranaszek) to contact the Polish High Command. This plane (Probably the LWS-3 Mewa that had been added to the unit two days earlier) was shot down by Soviet a near Horodenka (see No. 4 on map). Officer Cadet G. Ranaszek was later executed by the NKVD along with other Polish officers at the Starobielsk prison camp. Another crew from the 24th Recce Squadron reconnoitered the roads around Równe. At 1800, a RWD-13 Czapla from the 53rd Observation Squadron (Observer Captain S. Sawczyński and Pilot NCO W. Fajks) took off for Dubno to deliver a message. In the ensuing darkness, the crew could not find a suitable landing field and they had to abandon their aircraft by parachute. The 63rd and 66th Observation Squadrons from Stasin airfield also flew missions over the border.

The afternoon of the 17th Soviet a fire damaged a RWD-14b Czapla over Obertyn; the crew, Lieutenant Observer A. Baranski and Pilot NCO S. Laskowski, made a successful forced landing and, after burning their damaged aircraft, they safely returned to their squadron. A platoon from the Training Observers Squadron of the Deblin School cooperated with the Luck Defence Group and a group of Polish troops under the command of Col. S. Hanka-Kulesza.

The last air operation against Soviet troops was a recce flight from Rawa Ruska on 22 September. That afternoon, the Polish planes with Polish crew and three Czechoslovakian pilots were evacuated to Romania. Brigade General P. Strzemieński was evacuated on one of these aircraft.

Back on the 17th on the northern front, the 17th Polish Staff ordered aircraft from Wilno-Porubanek airfield to search the border areas. When one flight of Polish training planes encountered Soviet biplanes (R-5?) flying westward, the Soviet crewmen waved at the Poles. The next morning, all flyable Polish aircraft were evacuated to Latvia.

MISCELLANEOUS AIR ACTIONS

The following reports are preserved in the General Sikosky Institute in London: On the 22nd, Sublieutenant J. Gerstel flew a mission

to the Ołyka area on an RWD-8. Sublieutenant J. Gerstel has a more interesting story. He was serving as CO of an a battery attached to the 1st Air Regiment when, on 12 September, he was captured by the Germans. Two days later he escaped and was able to return to his own unit. On 17 September, he was captured by the Soviets. Two days later he again escaped. He found an abandoned PWS-26 plane 4 km south of Kopyczyńce, but was shot down by Soviet anti-aircraft fire and again made a prisoner. For a third time he escaped, this time making his way first to occupied Warsaw and then, in the winter of 1939-1940, to France. For these exploits, he received four Crosses of Honour.

The last Polish air unit to fight against the Germans and Soviets was the 13th Independent Observation Squadron which was created at Włodawa on 26 September by Lieutenant E. Piorunkiewicz. The Squadron had one PWS-26 and two RWD-8 planes. At least two times these aircraft were unsuccessfully attacked by Soviet aircraft.

Two Soviet I-16 attack a detachment of Polish ground crew in a small town south of Włodawa. One of the Soviet planes was shot down by a Polish airman operating a machine gun from the roof of a car.

In spite of their overwhelming superiority in numbers of aircraft, there are only a few reports of Soviet aircraft attacking Polish ground troops. On the 17th, five Soviet planes bombed Wolkowysk, and the next day a few planes attacked Nowa Wilejka (although these latter aircraft may have been He-111 from LG-1). On the 20th, Soviet fighters strafed Polish defence positions around Grodno, injuring a few Polish soldiers. On 30 September, over 60 Soviet aircraft, in three waves, bombed Polish troops in the Milków-Siemien area. Five soldiers of the SGO "Polesie" were injured and a few horses killed. It seems that the Soviet airmen were no very well trained. During the battle of Szack (see map), Soviet recon planes inspected the Polish defence positions, and on the morning of the 24th, twelve Soviet planes bombed Polish troops in Pniewy, killing 5 soldiers and injuring 20. On the 25th, Polish a shot down a Soviet plane while 25 bombers attacked troops under the command of Lieutenant Col. T. Tabaczynski.

An interesting action occurred on the 17th when, near Sarny, Soviet planes attacked to Polish armored train No. 52 "Bartosz Głowacki" which was equipped with a few a machine guns and probably two 40-mm Bofors guns. One Soviet plane was shot down. On the 22nd the Polish armored train was attacked by 40 Soviet planes, which damaged one gun compartment. In return, the Polish a gunners shot down two planes and damaged two others.

Janusz Ledwoch (SAFCH #780), PO Box 106, 00-961 Warsaw 42. POLAND.

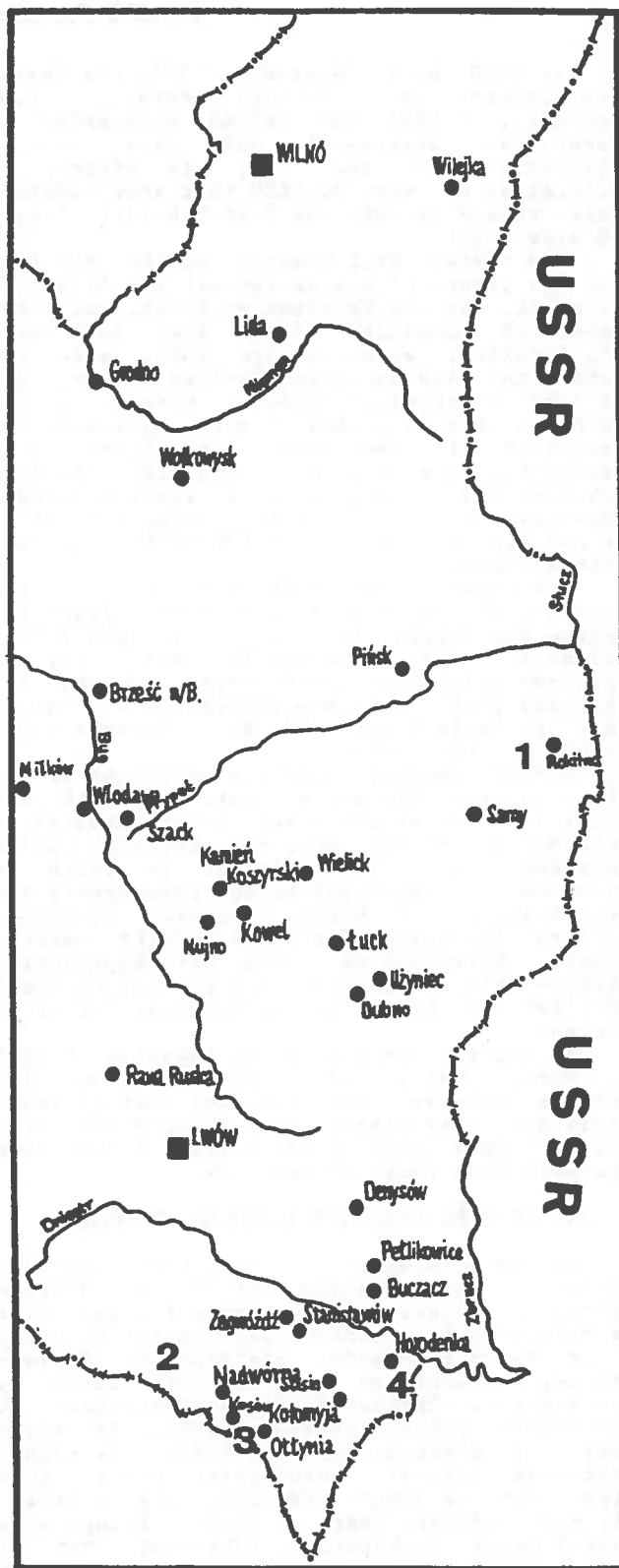
SOVIET AIRCRAFT IN 1939

1. Polikarpov R-5 of an unknown unit in the Kiev area. Red star with black circle and black "3".
2. Polikarpov I-16 Type 10 stationed in the western part of the USSR.

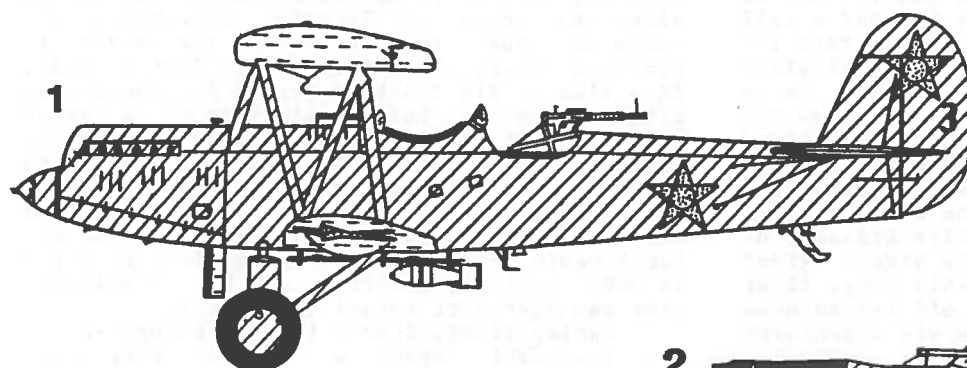
(A) Black FS27038; (B) Insignia Red FS21140; (C) White FS37925; (D) Light blue approximately FS35414/35484; (E) Dark green probably FS34079.

Drawings based on photographs from the contemporary Soviet press.

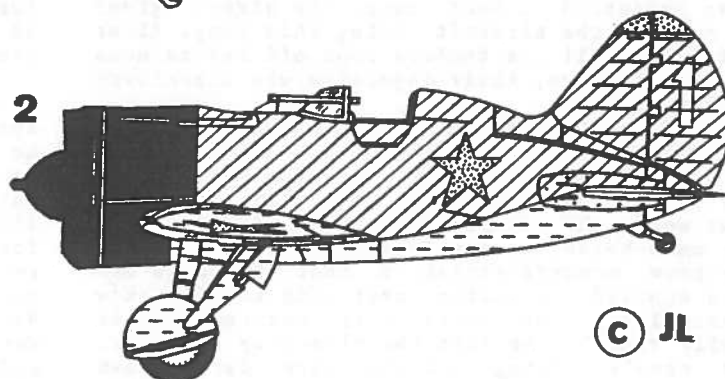
POLISH EAGLES vs RED FALCONS



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Soviet Aircraft
in 1939



© JL

A PERSONAL RECOLLECTION

Walerian Trzciński

When the war broke out, I was 14 year's old and living with my family on my father's estate in the village of Michałków (Stary) in the district Kołomyja. At first, the war seemed to be far away, but soon the echoes of war began to reach our ears.

Sunday, 17 September 1939, was warm and sunny, as were all the days that September. The air was clear and one could see the snow-covered peaks of the Carpathian Mountains to the south. Around 1000 hours, while I was enjoying the wonderful landscape, I heard the sounds of aircraft engines. About 4 km to the south I saw three twin-engine aircraft flying over the railway line Lwów-Stanisławów-Kołomyja-Sniatyn. When I first saw them, they were about 1 km from the railroad station at Korszów. Soon after I first spotted them, they began to bomb the railway; because of the distance, I could not see the bombs, but I heard three or four loud explosions. Then, I noticed a small single-engine aircraft flying above the trees and closing in on the bombers at high speed. This plane attacked the bombers, I could hear the short salvos of its guns, and the last bomber in the formation fell away and crashed. The same thing happened to the second bomber before the final bombers turned and fled towards the west.

(Later, the location of this action, the village of Czeremchów, was visited by Mr. Mieczysław Romanowski, who had been recently mobilized into the State Police. He told me that the bombing was the work of Soviet airplanes and that only a telephone line had been slightly damaged. I do not know what happened to the crew, but I do remember that, immediately after the Soviet Army occupied the area, funeral ceremonies were held for the downed airmen in Ottynia.)

On the same day, 17 September, while I was going to high mass at the church in Bohorodczyn at noon, I spotted a RWD-limousine aircraft (Translator's note: probably an RWD-13) landing on the large pasture at the edge of which was the shop of Antoni Oknieński, the local blacksmith. The aircraft probably belonged

to a civil flying club, but it was painted overall in khaki and the civil markings were crudely overpainted. The pilot had a bandaged head and the passenger was an officer, probably a captain, wearing a green infantry uniform and a black beret. The officer enlisted the help of the local people to prepare the pasture as a landing area. They removed the mole hills and filled in the trenches left over from WWI. They also filled in part of the deep ditches along the Michałków-Bohorodczyn road to allow aircraft to taxi across the road. Arrangements were made to accommodate Air Force personnel at private homes in the "Polish Colony" in Michałków (so called because Michałków Stary was mostly inhabited by people of Ukrainian origin) and in the large "People's House" located on the edge of the landing field.

Later that day, PZL-37 Łos aircraft came in from the south-east with the last one landing at 1800. By this time it was dark enough for the pilots to use the lights inside the cockpit which I could see as the aircraft made the last turn before touching down. I was told the aircraft were from 216 Bomber Flight. The commander, kpt.pil. Stanisław Cwynar and his crew were accommodated in my father's house.

The next day, 18 September, at about 0600, I accompanied kpt. Cwynar to the improvised landing field. The PZL-37 aircraft were hidden under the trees, 5 or 6 in a young oak forest near the farms of Mr. Kwiecień and Mr. Skwarek, and the remainder, I do not know how many, on the opposite side of the road in Las Michałkowski (Michałków Forest). A PWS biplane was also positioned close to the young oaks.

At that moment, an aircraft appeared which dropped a message and flew away. Kpt. Cwynar read the message and then announced that the Soviet Army had crossed the Polish border and the flight was to evacuate to Romania. Because there was not enough fuel for all the airplanes, kpt. Cwynar decided that two of the aircraft had to be destroyed. It was then that I remembered that some gasoline could be found in Józef Ziarkiewicz's shop. I asked his son,

Tadeusz, how much gasoline his father had in stock and Tadeusz replied that he had a full barrel. One of the airmen said that this did not help because the flight had no refueling equipment. My suggestion that funnels (also from Mr. Ziarkiewicz's shop) could be used was not acceptable since the refueling connections were on the lower surface of the wings and the tanks had to be refilled under pressure. However, since the owner of the shop was also the commander of the Volunteer Fire Brigade, he also possessed a hand pump. The airmen agreed to refuel the aircraft using this pump. After refueling, all the bombers took off before noon and the bombers, their objective was Czerniowce in Romania.

During the Flight's stay at my village, I was allowed to see one of the PZL-37. I entered through the dorsal gunner's station and noticed the ammo-boxes hanging on the wall. While the guns were the natural color of oxidized metal, the ammo-boxes were painted a deep red. One of the crew members explained that the boxes had been emptied in action over Łódź and Piotrków Trybunalski. The boxes were painted to be easily visible against the blue-grey interior. The crew's flying uniform were dark brown leather as were their flying helmets. Personal weapons consisted of VIS pistols.

POST SCRIPT

The above recollections allows a rather unique study of how various historians report the same event. In the first Polish book on the September Campaign published after 1945, "Lotnictwo Polskie w Kampanii Wrześniowej 1939" ("Polish Aviation in the September Campaign 1939") WINW 1947, the author, W. Zaczekiewicz reports that on "17 September X Sqn flew over Polish-Romanian border and landed in Czerniowce in the early evening hours, and XV Sqn move to Bohorodyszczce airfield in the Obertyn area and on 18 Sept they flew out to Czerniowce." It is not known were col. Zaczekiewicz got the name of the last Polish airfield used by XV Sqn; but no such place exists on the maps.

This mistake subsequently appears in several other books that were written later, including the very good one by J. Pawlak, "Polskie eskadry w Wojnie Obronnej 1939" ("Polish Flights in Defence War 1939") WKiŁ, Warsaw 1982, BSP No. 14: "On 17 Sept took place the Flight's move to Bohorodyszczce near Obertyn. Due to the complicated military situation, combat missions were not made that day. The next day, senior military master worker Oyrzanowski reached the airfield and delivered to the Sqn commander gen. Ujejski's orders for the Flights to be evacuated to Romania. The departure of the airplanes took place at 0810." Not only is the mistake about the name of the airfield repeated, but the reason combat mission were not flown is mistakenly given as "complicated military situation" rather than the fact the aircraft arrived after twilight.

The role of senior military master worker Oyrzanowski is further discussed by Z. Wawszczak in "W kabinie Łosia i Wellington" ("In the Cockpit of the Łoś and Wellington") KAW, Rzeszów 1986). "On 18 Sept, senior military master worker Wacław Oyrzanowski turned up in Bohorodyszczce with a dispatch from gen. Ujejski that ordered to Flight to be evacuated to Romania. This date (18 Sept) is according to Pawlak ("Polskie eskadry ...), however, it seems that Oyrzanowski arrived a day earlier, or in the night. From Maślanka we learn that at 0400 a machine departed from

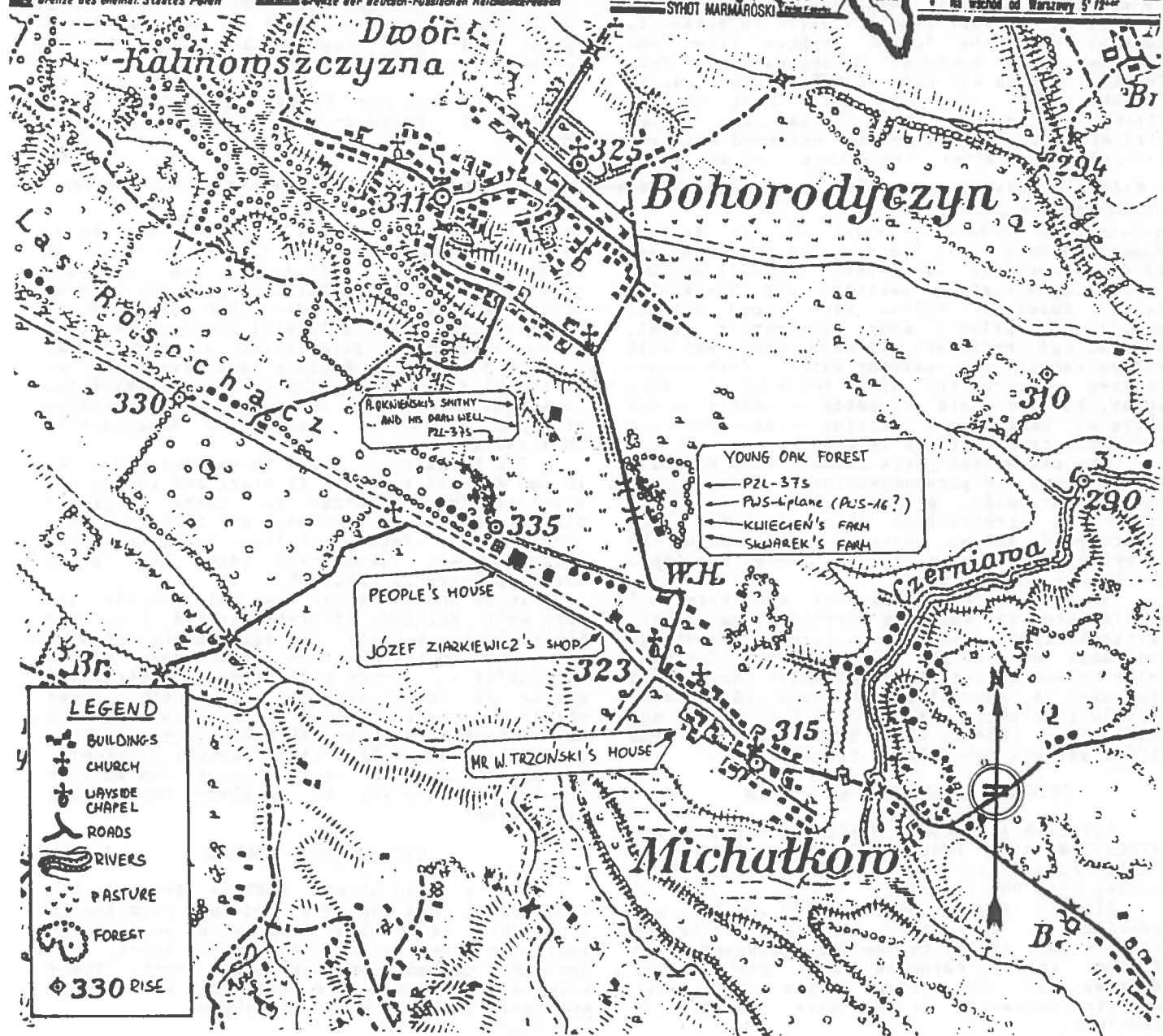
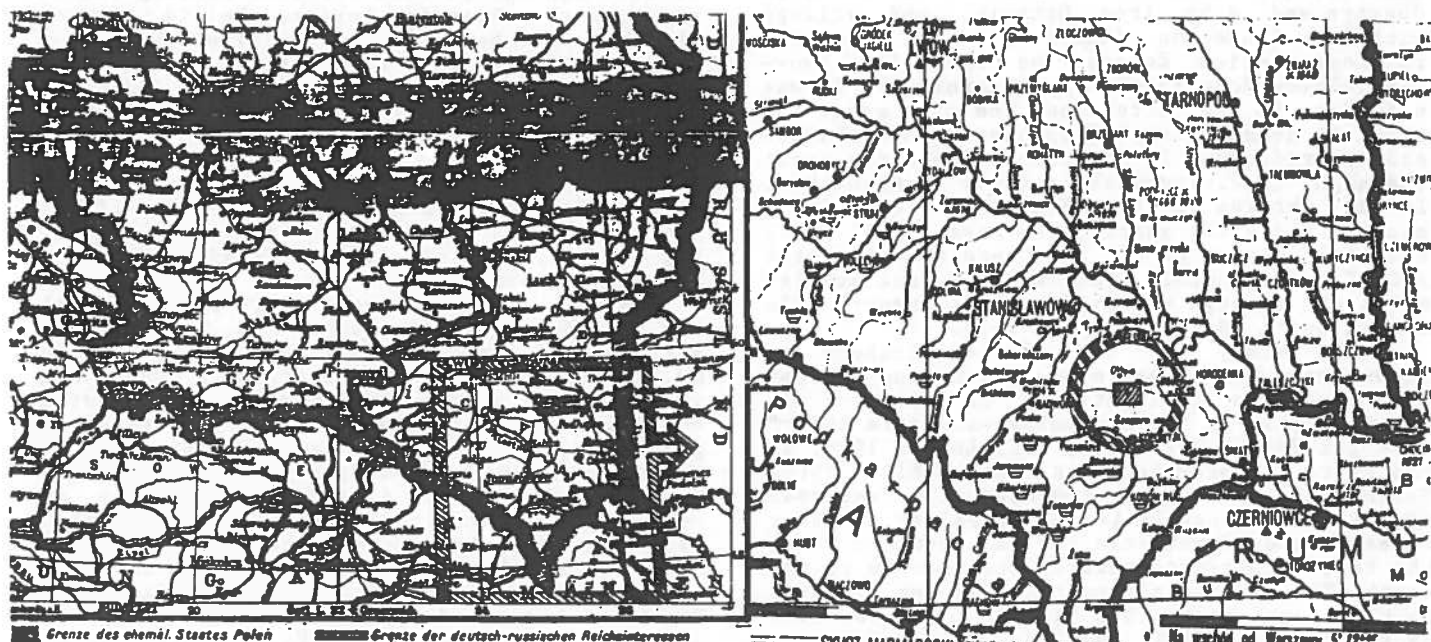
Bohorodyszczce to reconnoiter weather conditions along to route to Romania. Therefore, the commander must have received the order to evacuate before this time. On 18 Sept at 0834, five Elks of 216 flight departed for their last flight from a Polish airfield." It seems possible that Oyrzanowski informed kpt. Cwynar about the Soviet invasion and the orders to evacuate the Polish Army to Romania, but official confirmation were probably dropped from an aircraft about 0600. Also, the take off for Romania could not have taken place as early as 0800 because, according to Mr. Trzciński, time was needed to refuel the aircraft.

During XV Squadron's time in Bohorodyszczyn, Mr. Trzciński spent a lot of time with kpr.strz. Eugeniusz Siedlecki, who is recorded as being a member of kpt.obs. E. Prusiecki's crew in 217 Flight. However, it is possible that Siedlecki was transferred to 216 Flight; 216 Flight was not fully formed a 1 September for it lacked 6 air gunners, a number of technical personnel, and the aircraft were not completely prepared. Another member of XV Squadron was por.pil. Ludwik Maślanka. Z. Wawszczak writes: "On 17 Sept, por Maślanka made two reconnaissance flights on an RWD-13 with the aim of finding a new airfield for the Flight. This airfield, the last on Polish soil, was found at Bohorodyszczce near Horodenka. After relaying this information to the commander, Maślanka returned to Bohorodyszczce where he met each incoming Elk and immediately concealed them in woods as a protection against attack. The Lieutenant ate supper at the house of his old friend Jozef Pieczonko. He remembers that it was raining when left his friend's house to spend the night at the People's House." A meeting between Maślanka and Pieczonko was not unexpected since Pieczonko was the Roman-Catholic priest for Bohorodyszczce. It was not raining in Bohorodyszczce and Michałków on the evening of the 17th. There was lightning far to the north, and Mr. Trzciński says that the residents of Michałków assumed that the Russian were crossing the Dniestr River and that the lightning was thought to be flares and explosions of a battle.

Thanks to Z. Wawszczak's description, one problem can be cleared up: The pilot of the RWD-limousine aircraft was Maślanka, who had a bandaged head because he had been wounded on 7 September. Mr. Trzciński also remembers that the commander of 217 Bomber Flight, kpt.obs. E. Prusiecki, was present at Bohorodyszczyn and that his aircraft was hidden in Las Milchalkowski near the People's House while Kpt. Cwynar's machine was hidden in the young oak forest on the opposite side of the Michalkow-Bohorodyszczyn road. So, it appears that Mr. Trzciński's recollections are not precise in that the entire XV Squadron was based at Bohorodyszczyn, not only 216 Flight.

The matter of the burnt aircraft is discussed in several of the books. Mr. Pawlak writes that two PZL-37 were burnt before the move to Bohorodyszczyn. Other historian report two aircraft destroyed at Bohorodyszczyn. What is sure is that the Squadron took off with the same number of aircraft as the arrived with the day before. By the way, Mr. Pawlak identifies the PWS biplane that accompanied 216 Flight as a PWS-16.

The best published description of the incident described by Mr. Trzciński is found in a rather poor book by A. Kurowski, "Lotnictwo Polskie w 1939" ("Polish Aviation in 1939"), MON, Warsaw 1962. "On 17 September, XV Squadron landed on a big grassy pasture on the edge of



Bohorodyczyn (Tłumacz district) 8 km from Obertyn and 8 km from Ottynia, and village Michałków (Kołomyja district) 5 km from the railroad station Korczów on the line Lwów-Stanisławów-Kołomyja-Sniatyń-Czerniowce. It was a Sunday in the afternoon. The crew spent the night in neighboring Polish houses in Michałków and Bohorodyczyn. IV Squadron's commander spent the night in W. Trzciński's house in Michałków. In the morning of the 18th, after receiving a message and after sharing the reserves of fuel, the airplanes took off for Czerniowce at about 1000." Unfortunately, Kurowski is not precise about the message received by kpt. Cwynar. This detail would have been a big help.

The story of the Soviet bombers is interesting. It is not known who first described this incident. One of the first was K. Liszewski in "Wojna polska-sowiecka 1939r" ("Soviet-Polish War 1939") PFK, London 1986. In the third chapter we read that while three Soviet bombers were attacking the railroad station at Tarnawica Leśna, a Polish fighter appeared and downed two of the bombers while the third retreated towards Stanisławów to the north. The Polish aircraft headed for Kołomyja to the south-east. This incident was observed by policeman S. Pelc who was arrested by the Soviets in October 1939 and while in prison in Kharkov met the Polish fighter pilot who attacked the bombers. Unfortunately, Pelc forgot the name and unit of this airman, but he remembers that the pilot said that he was flying to Romania when he saw the Soviet aircraft attacking a Polish railroad station. Unfortunately, after the attack, he was short

of fuel and had to make a forced landing before reaching the Romanian border. He did not say when and how he fell into Soviet hands. A similar, but shorter description is found in "Samoloty myśliwskie września 1939" ("Fighter Aircraft of September 1939") NOT/Sigma, Warsaw 1987, "Aerohobby" series No. 2, by Cieślak, Gawrych, and Glass. The claim is made that the aircraft landed in territory already occupied by the Red Army. According to Mr. Trzciński, the target was the railroad between Czeremchów and Korsów, and not the railroad station at Tarnawica Leśna.

All the authors seem to have problems with the geography of the area, so I would be surprised if Mr. Trzciński, Mr. Liszewski, and Mr. Cieślak are not describing the same incident. It might seem logical that Tarnawica would have been the better target (stores of gasoline, etc.), but the authors forgot that the Soviets were probably trying to hinder the Polish evacuation by disrupting the lines of retreat. The Polish pilot could not have landed in Soviet held territory, because the Red Army did not enter Michałków until the 21st and they probably occupied Kołomyja a day earlier. Mr. Trzciński has tried to locate this Polish pilot or even information about his name. Unfortunately, he has found out nothing. If the pilot did fall into Soviet hands he was probably murdered by the NKVD.

Postscript by: Paweł Przymusiaka (SAFCH #801), ul. Długosza 8/27, 01-174 Warszawa, POLAND.

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outstanding 1/48-scale model of the Austro-Hungarian Berg D-I. The vacuform parts consist of double-surface wings with suitably subduded ribs, single-surface vertical and horizontal tails, fuselage halves with good surface detail, a pilot's seat, instrument panel, wheels, and radiator. All these parts are well molded except the radiator which I find unconvincing. Struts are also included on this sheet, but it would probably be easier to use these as pattern for cutting strut stock (not included) to the proper length.

The cast-metal parts consist of a detailed engine with separately-molded intake and exhaust manifolds, propeller, and two machine guns. The instruction sheet includes good construction notes, sketches for detailing the interior, and a good set of 3-view drawings. Decals are not included.

The Sierra Models kit of the Berg D.I should make up into an eye-catching model, particularly if finished in lozenge camouflage available as decals from Americal/Gryphon. Color schemes for this aircraft have been discussed in several recent books and magazine article (including SAFO #45). For this, and other Sierra Models kits available from the SAFCH, see the SAFCH Sales Service.

ESTONIAN & LITHUANIAN DECALS

ESTONIAN AIR FORCE MARKINGS 1918-1940 and LITHUANIAN AIR FORCE MARKINGS: 1/72-scale decals; Blue Rider Models, 43A Glasford St., Tooting SW17 9HL England.

Richard Humberstone, SAFCH member and proprietor of Blue Rider, continue to be the modelers best friend in the decal business. Two of his recent releases are particularly important at this time since they cover countries currently in the news: Estonia and Lithuania.

The Estonian sheet, printed in white, blue, and black, measures 13.5 cm by 19 cm. It contains national insignia and markings sufficient to make 4 Estonian aircraft: one of three DH-9, either an Avro 504K or 504R, a Sopwith Camel, and a Bristol Bulldog. (Most of these have been illustrated in SAFO.) The Camel, 504K, and Bulldog are available as Airfix kits, the 504R will need some conversion work, and the DH-9 is available as a conversion kit from Blue Rider (see review elsewhere in this issue).

The Lithuanian sheet is smaller (13 cm by 10 cm) and printed only in black and white, but provides the markings for three aircraft: Gloster Gladiator (Matchbox or Heller kits), DH-89 Dragon Rapide (Heller kit), and the National Guard Klemm Kl-35 (Huma kit) which first appeared in SAFO #39.

These sheet, as all Blue Rider decals, are very well printed. Aircraft marked with the black, blue, & white triangle of the Estonian Air Force or the white & black cross of the Lithuanian Air Force will be real conversation pieces in any collection of models. These sheets are available (or will be as soon as I can restock) from the SAFCH Sales Service. For a list of other Blue Rider decals available, see the sales list in this issue. Can we hope for Latvian marking to complete our Baltic collection?

DECALS FROM FRANCE

1/72 & 1/48 DECALS CARPENA. These decals from France are the best and most detailed on the market today. The first sets were originally marketed under the "CMV" label, but Jean-Loup Carpena has now taken over. These folks are avid modelers and aero historians; and their love for our craft shows.

(Continued on page 127)

POLISH AIRCRAFT COLORS REMEMBERED

I recently interviewed an eye-witness who can shed some light on the camouflage colors used on Polish aircraft in 1939. Mr. Bogdan Papierski's father worked at Okęcie airfield and Bogdan spent most of his 1939 summer vacation on this airfield.

He remembers that the P-11c were much lighter than the PZL-37 and the P-11c were definitely brown while the PZL-37, while a little brownish, were definitely green. He indicated that while FS30118 is similar to the color he remembers on the P-11c, the actual color was a bit more yellowish. (FS 30118 is similar to the exposed paint found on the museum's P-11c. The unfaded color is similar to FS30108 although this is too chocolate and should have a slight olive shade.)

As for the PZL-37, Mr. Papierski remembers its colors even better for, in 1930, the mechanics at Okęcie gave his father a model of the PZL-37 as a birthday gift. The model was painted with the original paint used on the Los. Bogdan was this model everyday for the next five years before it was lost during the Warsaw Uprising in 1944. He said the color has no exact equivalent in FS595a, but that there are three colors that are very close: FS34095

and 34097 are similar to the color he remembers, but they need a touch of brown. FS34098 has the right amount of green and brown, but it is too grayish and a bit too light. (Although these are lusterless colors, the colors used on the PZL-37 were semigloss.) Mr. Papierski said that the old Monogram 1/48-scale P-40 kit was molded in a plastic whose color accurately matches that used on the PZL-37.

As for the undersurfaces, Mr. Papierski does not remember them as well, but he found 35526 and 35550 to be the colors which can be taken into consideration.

Another interesting fact remembered by Mr. Papierski concerns the second, unfinished prototype of the PZL P-50. He says that this aircraft had a narrow, horizontal Navy Blue stripe or arrow along the fuselage and a similarly-colored sunburst on the wings. (These sunburst stripes were similar to those used on some other Polish aircraft and on the Italian CANT 501.) This information is not confirmed by any other witnesses.

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Their current price sheet shows thirteen decals in 1/72 and eight in 1/48. As yet, no American distributor is carrying them (although Squadron Mail Order is interested), so you'll have to order directly from Decals Carpena, 14 rue Marcel Sembat, F-13001 Marseille, France. Pay in French francs (FF) and be sure to include postage.

Several general comments apply to the sets reviewed below (it's improper to refer to them as a "sheet," as all consist of two large decal sheets). First, color separations are razor sharp. With one exception, color registration is perfect. The exception is some of the French roundels on sheets 72.07 and 48.01. But let's put that minor problem into proper perspective: Set 72.07 has 127 multicolor individual decals (and 53 single-color individual decals), and only 10 roundels are slightly off registration. Set 48.01 has 94 multicolor individual decals (and hundreds of single-color individual decals), and only 14 roundels are off a bit. Roundels I can get from other sheets. The really important stuff, the intricate unit insignia and markings are dead on.

The instruction sheets are practically books in themselves. All important information is provided in both French and English. In most cases FS595a color matches and Humbrol paint mixes are provided. Sufficient arrangement drawings are given to show camouflage demarcation and decal placement.

Set 71.07, Indochina Part II & South Vietnam Air Force. 60 FF. This eight-color set contains complete markings for fifteen aircraft! It has four French aircraft: Aichi A13 "Jake" (Flotille 8S), SBD-5 (Flotille 3F), L-20A Beaver (ELA 52), & C-47B (GT 2/63), and eleven South Vietnamese aircraft: MS-500 Criquet (1st AOS), T-28C-1 (2 FS), A-1E (520 FA), A-1H (1 FS), Alouette III (ICC), A-37B (520 FS), C-47B (415 TS), B-57B (8 BS), C-119G (413 TS), U-6A (L-20) Beaver (33 TW), and O-1E (23 TG). The instruction sheet has eight pages.

Set 72.08. Mirage III/5 Part I. 60 FF. This set has two ten-color decal sheets! (When was the last time you saw one of those?) It provides complete markings for twelve aircraft. France IIIC (EC 2/5) in natural metal finish, a camouflaged IIIR (ER 2/33) and a brightly painted IIIB (EC 1/13) in 200th Anniversary scheme; Spain IIIEE: (111 Sq); Argentina IIICJ (Xa Brigada); Lebanon IIIEI; Israel IIICJ; Chile M50FM (Grupo 4); Gabon M5DG; Belgium 5BR (42 TRS); Libya M5D, and Zaire M5M (21 Esc). The instruction sheet has eight pages.

Sets 72.12 (white) & 71.13 (yellow), Codes, Numbers & Serials of the French Air Force, 1965-1988. 30 FF each. These double sheets are identical except for color. They contain a multitude of letters and numbers in three sizes, useful for a wide variety of French Air Force aircraft from the time period indicated. Several different styles in both solid and outline form are included.

Set 48.01, Chad 1983-1986, Operation Manta and Sparrowhawk. 60 FF. Two seven-color sheets contain complete markings for four French Mirage F1C (EC 1/5, 2/5, 2/12, 1/30), one French F1CR (ER 1/33), four French Jaguar As (EC 2/11, 3/11, 4/11, 1/11), and one Zaire Mirage M5M. The 12-page instruction sheet explains the fairly involved camouflage schemes that the French used in Chad.

Set 28.05. Vought F-8E (FN) Crusader 1964-1988. 60 FF. Two nine-color sheets with enough markings to let you model any Flotille 12F or 14F Crusader. The markings cover the three major schemes applied to the F-8s: delivery (FS36440/FS17875), FS36440 overall, or low-vis (Celomer 1520 "F1 blue") overall. Enough different decals are included to build one from either of the two earlier schemes and one of the low-viz planes.

Set 48/06. Foreign Mirage F1s. 60 FF. Without a doubt my favorite set so far. Imagine two decal sheets each the size of a Microscale sheet, and in nine colors! Complete markings

for eleven aircraft are included: France F1C-200 (EC 1/5; 50,000 flying hours); Greece F1CG (114 PM); Jordan F1CJ (25 Sq); Kuwait F1CK; South Africa F1CZ (3 Sq); Libya F1ED; Qatar F1EDA (7 Sq); Spain F1EE (Ala 46); Morocco F1EH(200); Iraq F1EQ-5; and Ecuador F1JE (Ala 21). This sheet is superb, but it does have one small problem: the yellow and red inks are slightly translucent. Carpena printed them over white, which helps, but they don't always quite match. The wingwalk stripes can be easily fixed by trimming away the translucent parts, but the Qatar roundel center rings will require some rather careful overpainting. We can only hope they find more opaque inks for future printings. This small nit aside, it's a great set and the markings will be useful for far more than just Mirage F1s!

Sets 48.07 (white) & 48.08 (yellow), Codes, Numbers & Serials of the French Air Force, 1965-1988. 30 FF each. These sheet are identical to Sets 72.12 and 72.13, but in 1/48 scale.

David Klaus (SAFCH #891), 3404 Ramsgate Terrace, Alexandria, VA 22309-2142.

OWN A PIECE OF HISTORY

AVIATION RELIC PRINTS, 8125 N. 32nd St., PO Box 576, Richland, MI 49083-0576.

SAFCH member Mike Lentz, in cooperation with the National Air and Space Museum, has made it possible for anyone to own a piece of fabric from an historic aircraft. At the present time, fabric is available from seven aircraft: DeHavilland DH-4, Albatros D.Va, Bleriot XI, Wright EX "Vib Fiz", Fokker T-2, Curtiss NC-4, and Douglas World Cruiser.

A two-inch square piece of the original fabric, removed from the wings or fuselage during restoration of the aircraft by the Smithsonian Institution, is affixed to the print just beneath the aircraft image. A signed

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"This might sound like a school report: 'What I did on my Vacation', but I would like to share some observations with our readers.

"There is a new city park, named 'Fuerza Aerea Mexicana', near Military Air Base No. 12 in Tijuana. On 29 June 1989, I saw on display there a North American T-28A Trojan in camouflage colors. The ID plate of this aircraft reads: 'Type T-28A, s/n 49-1693, Order No. AC 21800'. Back in 1979, this aircraft was number "1" and was used as a test bed for engines.

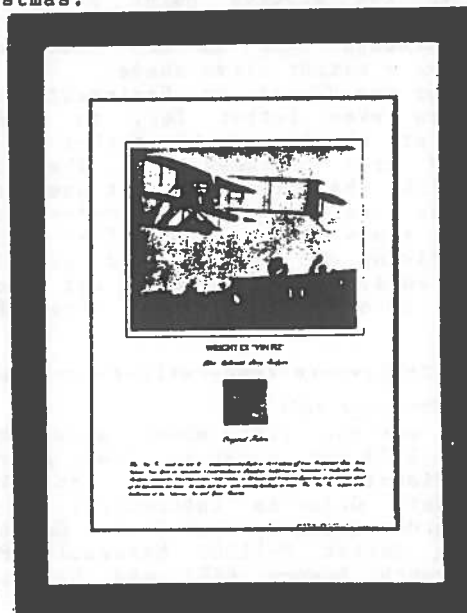
"At Air Base No. 9 in La Paz Baja California Sur, there are two T-28A on display: T-28-966 and T-28-974. Both aircraft belonged to the Escuadron Aereo de Pelea 203, which now operates 8 Pilatus PC-7 Turbo-trainers. The PC-7s I saw were 513, 511, 512, and 522.

"Finally, on 3 July, I visited the 4th Naval Squadron station at La Paz International Airport. Aircraft there included C-212 Aviocars MP-411, MP-412, & MP-413; Alouette SA319B HMR-135 (s/n 2157) & HMR-136 (s/n 2279); Cessna 402/401 Turbo MT-212, Cessna 404 Titan MT-217, Beechcraft 50 MT404, Cessna 337F MT422, Piper PA-23 Aztec MT-423, Cessna 205/206 MT-424, Beechcraft Baron 95-55 MT-425, & Cessna 441 Conquest MT-426.

"It was sad to see three Grumman HU-16 Albatross (MP-401, 402, & 404) stripped of parts and abandoned. At the time of my visit, MP-401 had already been broken into pieces. I was informed that all HU-16 had been grounded and were awaiting their fate.

Certificate of Authenticity from the Smithsonian Institution, and a fascinating two-page history portraying the aircraft and its colorful past, is included with each print. A special duotone printing process adds realism and depth to the aircraft image, reproduced from Smithsonian archival photos. Each print measures 15" x 10" and can be ordered individually or as a complete set, framed or unframed."

The unframed prints cost \$58.00 and double-matted prints in wood frames cost \$150.00, including shipping and insurance. As you can imagine, the supply of authentic fabric is limited, so if you're interested, do not wait too long to act. Orders received before 12/15/89 will be shipped within the USA in time for Christmas.



"The Mexican Navy has modified its insignia by adding an anchor to the Mexican triangle (Fig. 1). Also, any aircraft that has participated in a successful rescue operation will receive a gold star (Fig. 2).

Figure 1. Insignia carried on Mexican Naval aircraft as seen on CASA C-212 Aviocar MP-412 of 4/o Escuadron Aeronaval, La Paz, 3 July 1989. Color of anchor is dark blue.



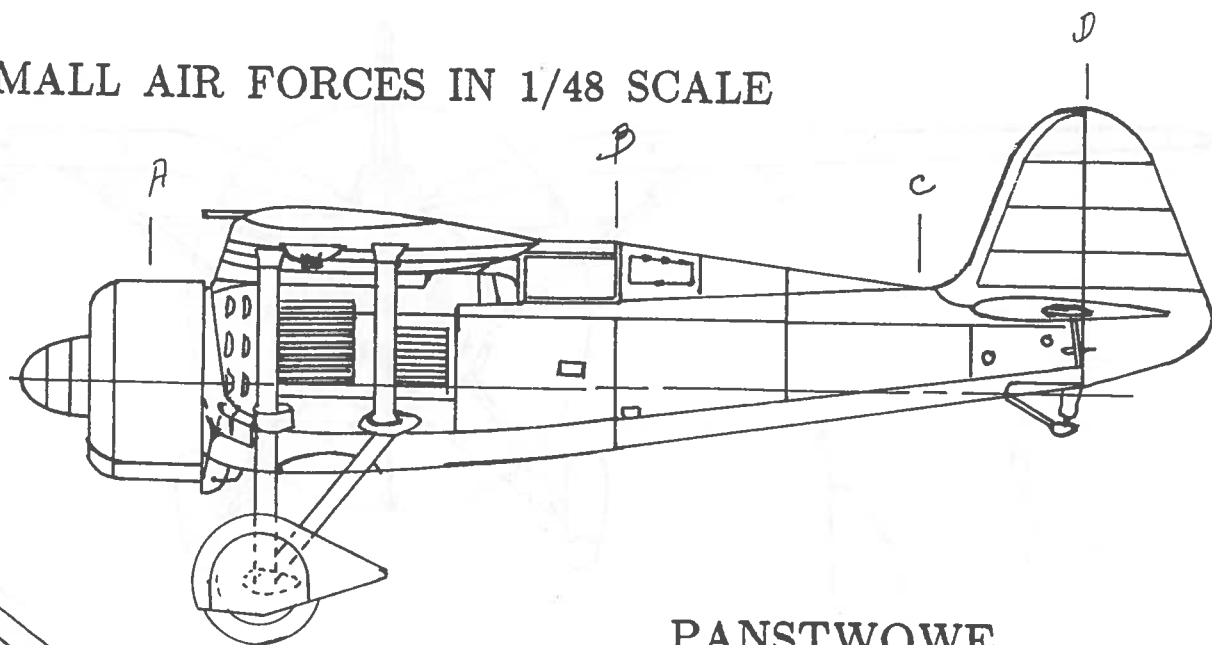
Figure 2

Figure 1

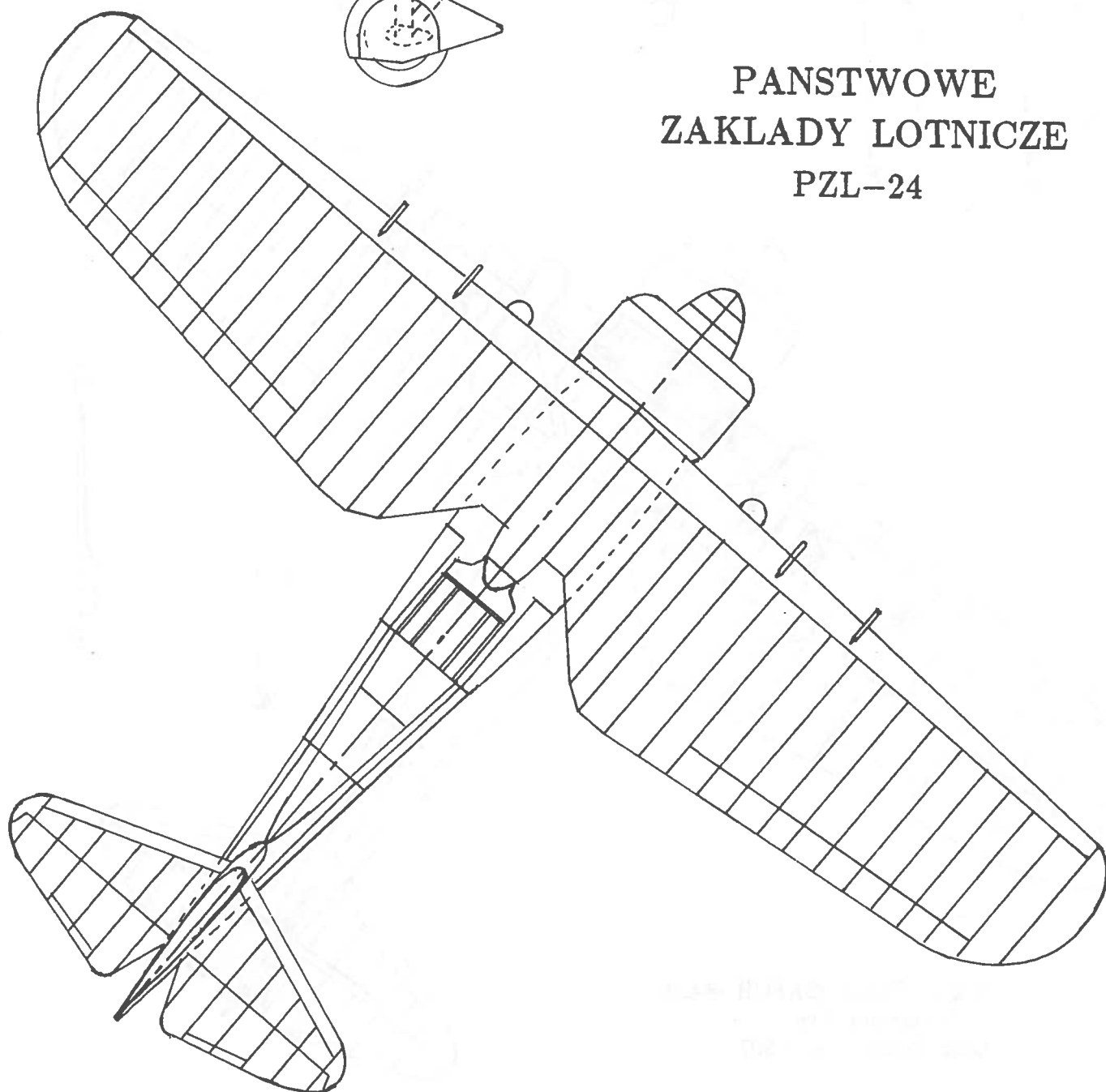
Figure 2. A blue bar with a gold star over the sqdn. insignia signifies that the aircraft participated in a successful rescue mission. Markings seen on Cessna 411 Conquest MT-426 of the 4/o Escuadron Aeronaval, 3 July 1989.

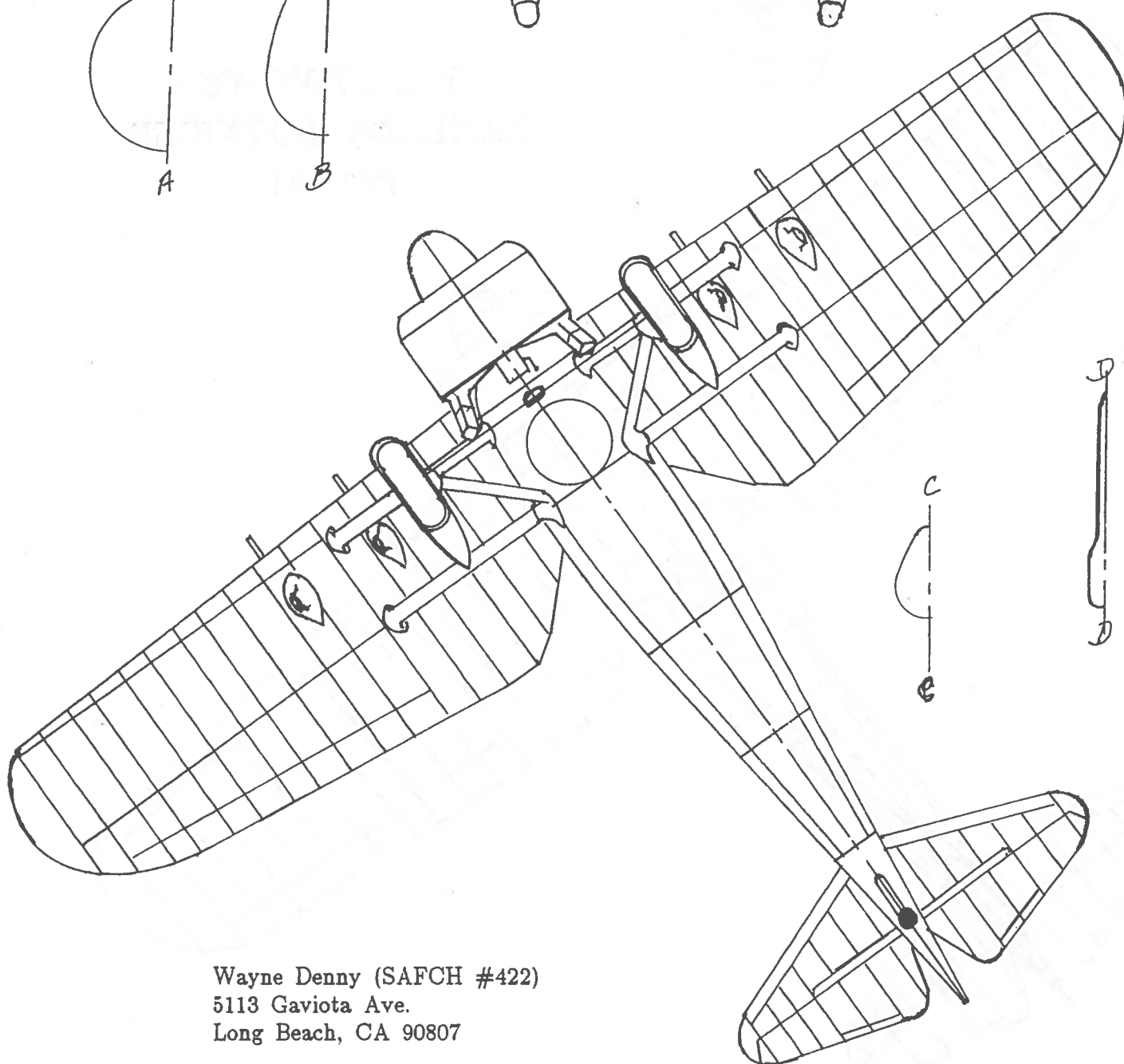
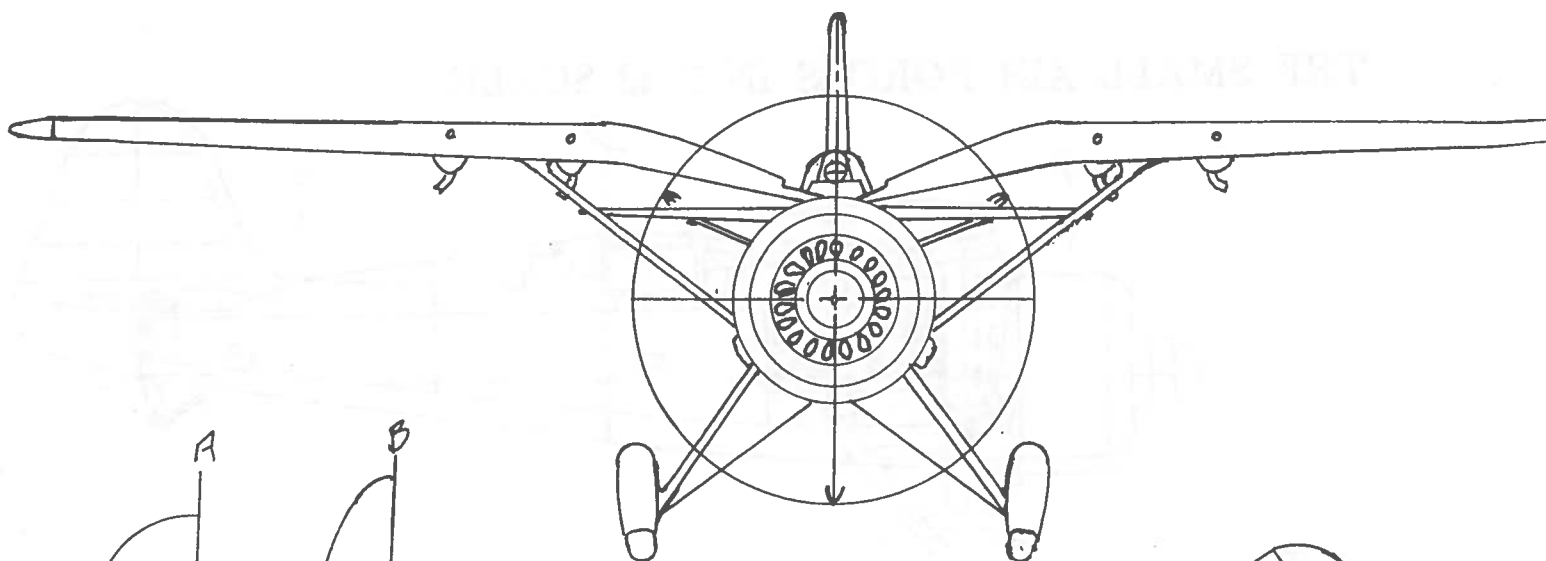
Santiago A. Flores (SAFCH #588), HHC 1/48 Inf. B., PO Box 752, APO NY, 09091.

THE SMALL AIR FORCES IN 1/48 SCALE



PANSTWOWE
ZAKŁADY LOTNICZE
PZL-24

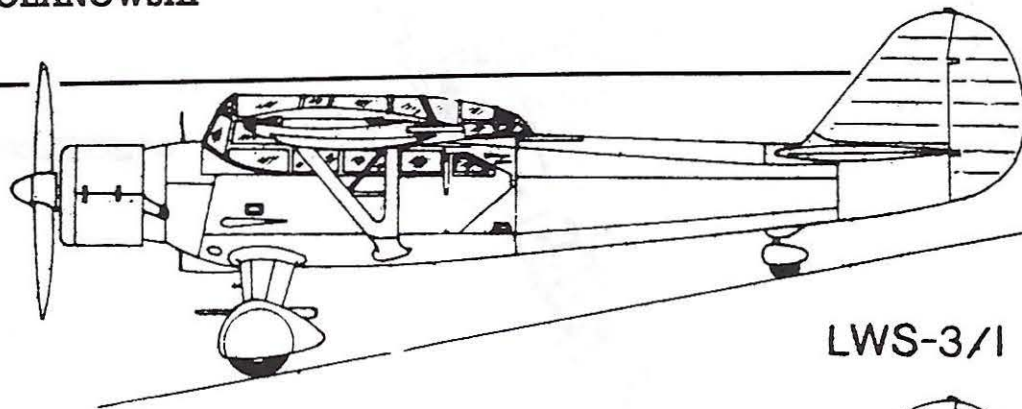




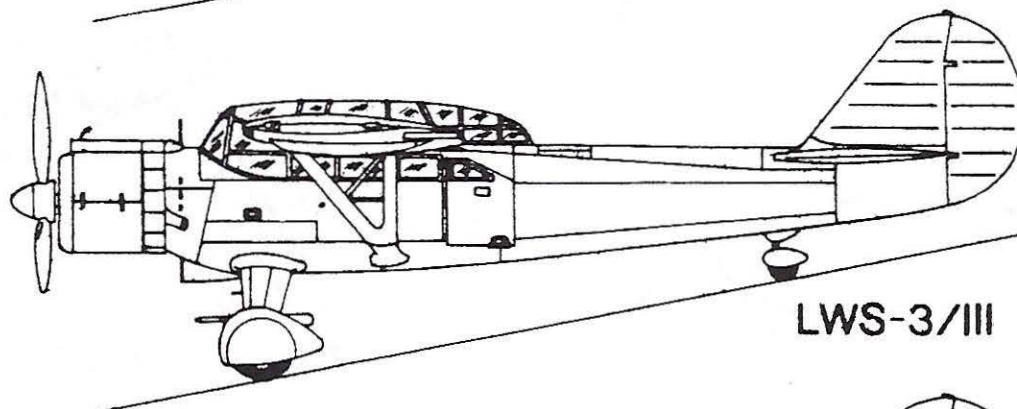
Wayne Denny (SAFCH #422)
5113 Gaviota Ave.
Long Beach, CA 90807

LSW 3 MEWA

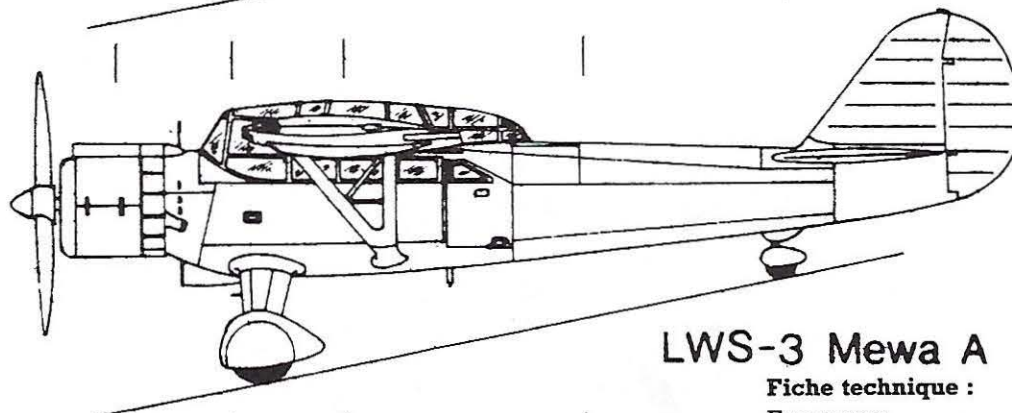
Przemysław SKULSKI
Jerzy KOLANOWSKI



LWS-3/I



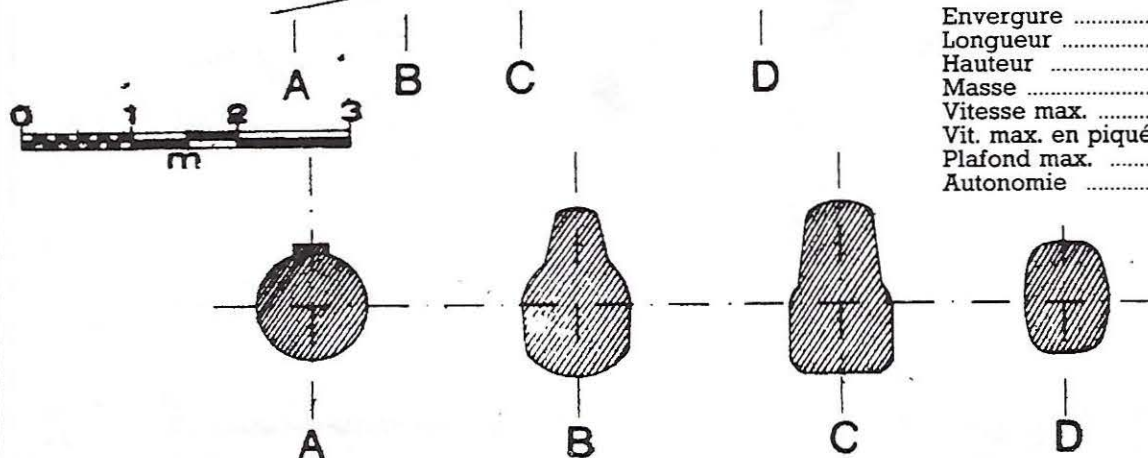
LWS-3/III

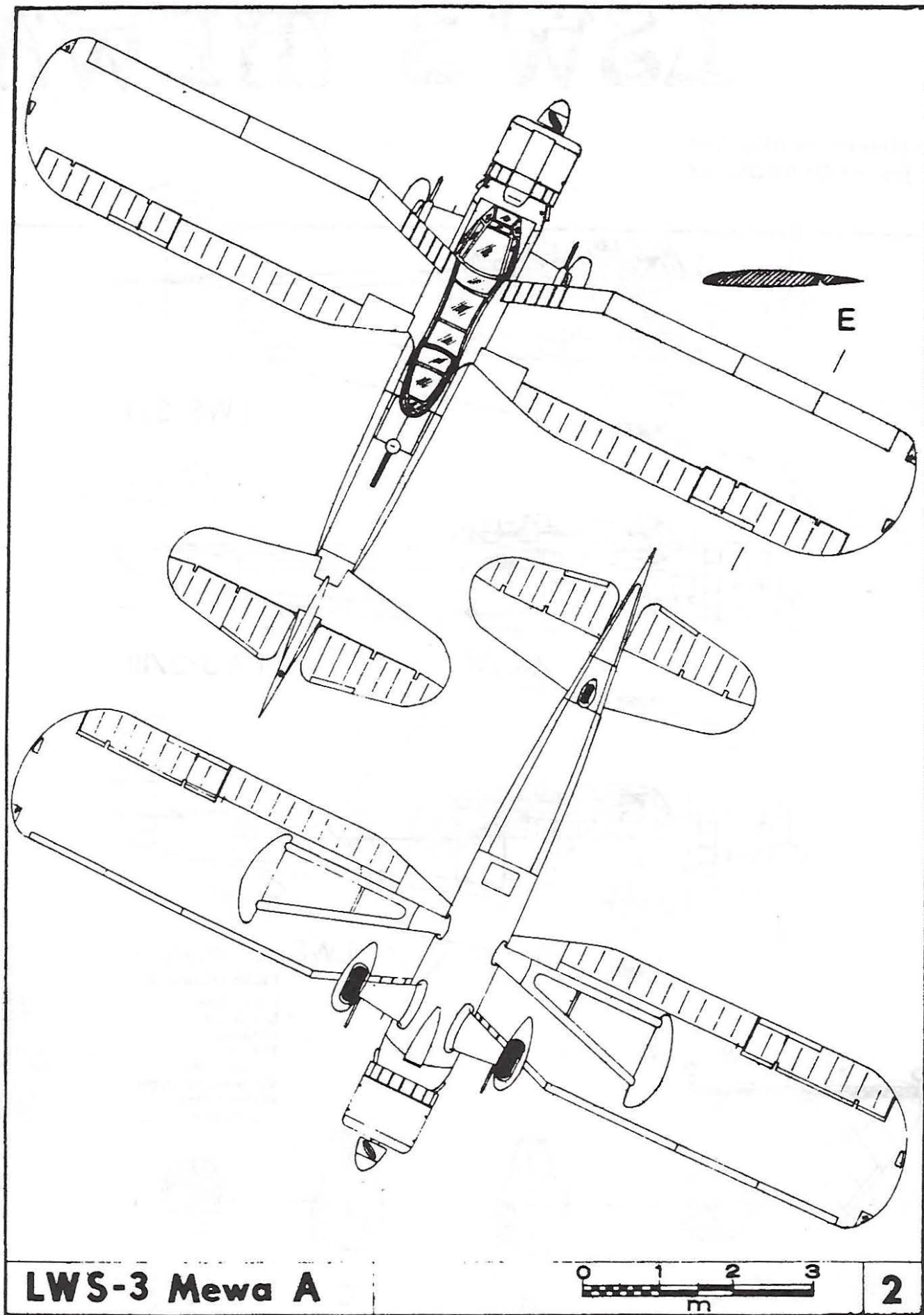


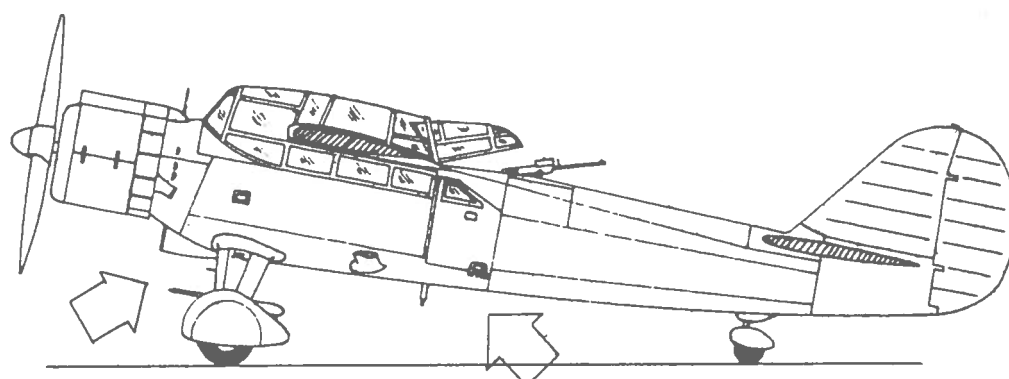
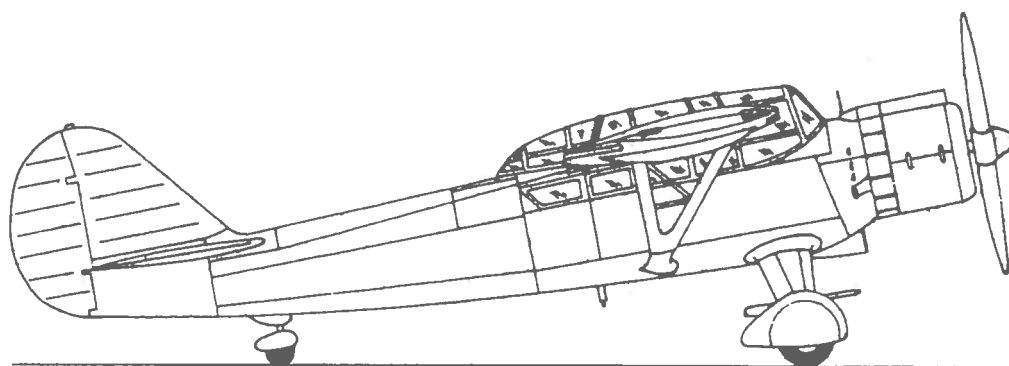
LWS-3 Mewa A

Fiche technique :

Envergure	13,45 m
Longueur	9,50 m
Hauteur	3,45 m
Masse	2 420 kg
Vitesse max.	360 km/h
Vit. max. en piqué	10 m/s
Plafond max.	8 500 m
Autonomie	700 km

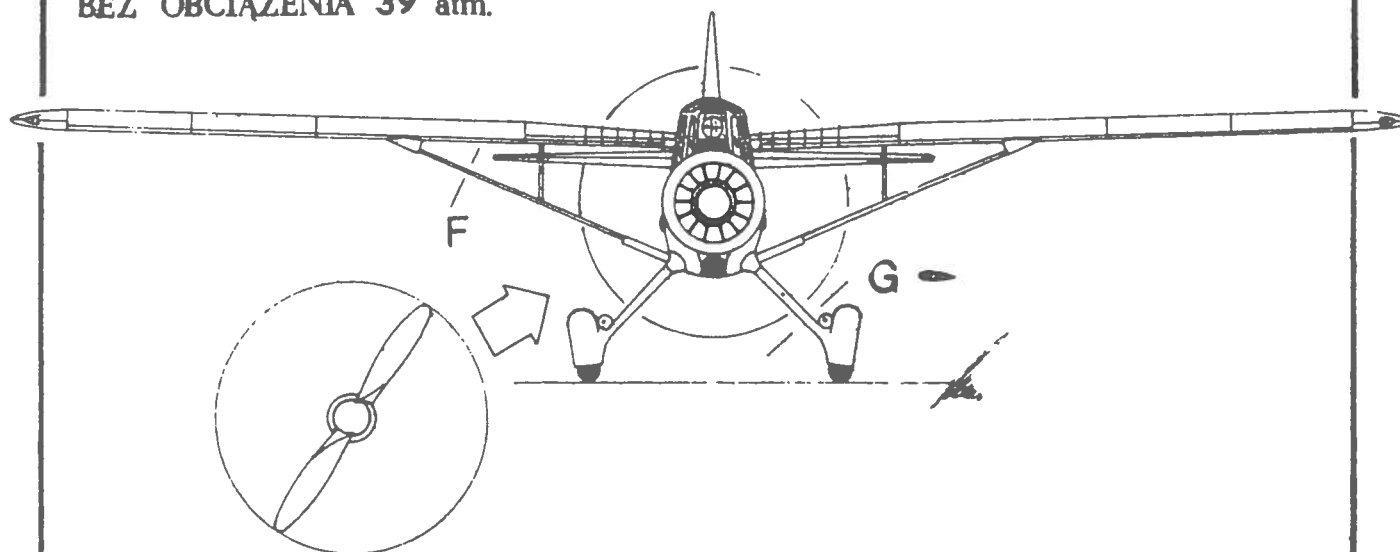






CIŚNIENIE
AMORTYZ.
BEZ OBCIĄŻENIA 39 atm.

Tu stawac



LWS-3 Mewa A



3

